NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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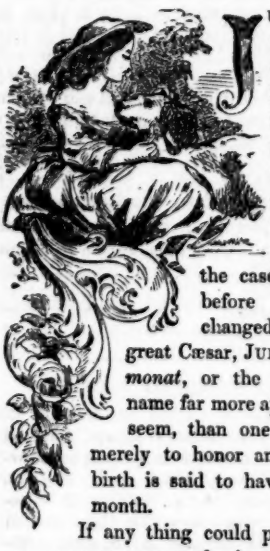
JULY.

Loud is the summer's busy song,
The smallest breeze can find a tongue
While insects of each tiny size
Grow teazing with their melodies,
Till noon burns with its blistering breath
Around, and day lies still as death.

JOHN CLARE.



JULY is a busy time with the farmers of New England. It is the great haying season here, as it is also with the farmers in many countries of the old world. Indeed, so generally is this the case in Europe, that, before its name was changed in honor of the great Cæsar, JULY was called *Heumonat*, or the mowing month, a name far more appropriate, it would seem, than one which was chosen merely to honor an individual whose birth is said to have occurred in this month.

If any thing could perpetuate a man's memory, or confer immortality upon a human being, surely to have his name borne down to posterity by one of the twelve months of the rolling year must be sufficient. But how signally has even this failed! Though the name of JULY is borne by the seventh month, how few of the living millions who speak or write that word are reminded of the dead monarch from whose title it was originally taken! Poor old Julius Cæsar, though your name may be pronounced by our lips or written by our pens, it has no power to "keep your memory green" in our hearts. It does not remind us of you, but of a certain round of work which has become associated in our minds with July—prominent among which are the labors of the hay-field, with the management of the mowing machine, the horse rake, &c. &c., which are doing the drudgery, among us, that was performed by the human machines which, under taskmasters, gathered the harvests of old Rome, in your day, most noble July—us!

And this suggests a pleasant practical thought —*the mission of machinery*. We say a pleasant thought, because, in the first place, we look upon machinery as the most effective of all emancipators. "Slavery and the slave trade," says Bancroft, "are older than the records of human society;" yet both history and observation show that slave labor has always been, and still is, confined to that class of work which requires physical strength rather than mental energy, or to those kinds of service which may be constantly superintended by master and mistress, or by their hired overseers. Slaves have never been, to any extent, employed in any branch of business in which calculation, thought, foresight or responsibility are necessary. This principle is so well understood, and so generally acted upon by slaveholders, that laws have been enacted to prohibit the education of slaves, and, even in our own country, women have been imprisoned for teaching slaves their letters! No, slaves are machines, and when their tasks can be more promptly and cheaply executed by the soulless engine, then, indeed, shall the oppressed go free. Slave labor, already driven from the manufacturing centres of the world, seems to have made its last stand on the broad fields of the plantation. A machine once introduced there, that shall harvest cotton as the McCormick or Buckeye does wheat, would soon whistle the death-knell of human servitude, provided the "necessities of war" do not anticipate the inevitable destiny of hot air and steam.

In the second place, it is pleasant for us to think of machinery as the improver and elevator of the laboring classes generally. Especially at this season of the year, when the physical system is weak-

ened by the tropical heat of the July sun, or our strength seems insufficient for the work which presses upon us, we love to think of the good time coming when wheels and cranks, levers and pulleys, of wood and iron, and other unconscious material, are to relieve overtasked human sinews on the farm, as they already have done to so great an extent in the shop and factory.

We do not suppose that all farmers will agree with us in these pleasant anticipations. There are now, as there always have been, many good men, especially among the laboring classes, who look upon the introduction of new machinery, and indeed, upon all new modes and improvements with fear and jealousy. The first saw-mill in England, it is said, was demolished. And probably there is no machine in use whose introduction was not objected to and opposed by some individuals, often with the plea that its employment would deprive honest men and women of the means of support. But this objection generally proves groundless. The old copyists who made books with the pen, in the city of Paris, mobbed the man who first offered printed books for sale; yet the invention of printing has increased bookmakers many hundred fold.

For our own part, we like to listen to the clatter of a mowing machine as it moves along through the meadow, and to the busy click of the sewing machine as it assists the women folks in their labor.

We rejoice at all these evidences of the union, even upon the farm and in the farm-house, of Mind with Hand.

TIME TO CUT TIMBER.

When is the best season to cut building timber other than evergreens—say oak, maple, beech, basswood, &c., to be cured in the old-fashioned way after it is in the frame? Our people differ very much upon the subject; some say when the leaf is off; others when it is on—some say when the bark will run; others prefer the winter in February. Another class, that when the sap is out of the wood, which they claim to be in summer, while others maintain that that time is in February. I have had but little experience, but that little leads to the time when the bark will peal, which is generally in the early summer. What say you? It is of importance to me just now, and I should like to know.—G. CLARKE, *East Springfield, March*, 1862.

P. S.—I notice in many of our frames, much of the oak has powder-posted. That ought not to be. I am a great lover of oak on account of its strength, but don't want a powder-posted building. I don't mean white oak; that has all left long ago.

[Summer is the best time to cut timber, chiefly because it seasons rapidly at that time. It should, of course, be left in the logs as short a time as practicable. Timber cut in winter is long drying, and incipient decay commences before the process is completed. There is rather more sap in a tree in winter and early spring than in summer, when the leaves have carried off a part. The wood is also rather less watery after midsummer than before, and dries better, and makes harder seasoned stuff. It is, therefore, not quite so well to cut it till rather after midsummer.]—*Country Gent.*

NEW PUBLICATIONS.

OPEN AIR GRAPE CULTURE; A Practical Treatise on the Garden and Vineyard Culture of the Vine, and the Manufacture of Domestic Wine. Designed for the use of Amateurs and others in the Northern and Middle States. Profusely Illustrated with new Engravings from carefully executed Designs, verified by direct practice. By JOHN PHIN, Author of Essay on Open-Air Grape Culture, to which was awarded to first premium of the American Institute. To which is added a Selection of Examples of American Vineyard Practice, and a carefully prepared description of the celebrated Thomery System of Grape Culture. New York: C. M. Saxton, Agricultural Book Publisher; Boston: A. Williams & Co. 1 vol. 12mo, 375 pp. Price $1.

This is a valuable work for the common cultivator. It has full directions in relation to the preparation of the soil by draining, trenching and manuring, the time and mode of planting the vines, and the subsequent care necessary to be devoted to them in order to secure compensating crops. It has a chapter, also, on the various modes of propagating the vine, and, indeed, upon every particular point of information which those unacquainted with grape culture may require. The work is beautifully printed on large type, and will be found a valuable help to those who consult its pages.

What we need, however—and what no book can supply—is a grape that is sufficiently hardy to withstand the rigor of our climate unprotected, and that will perfect itself during our short seasons of growth. We shall have such a grape, undoubtedly, but it has not made its appearance yet. In the meantime, let us consult the book before us, and press on to greater success.

THE BEST TIME TO PRUNE.

An old clergyman is quoted as defining this time to be "when your knife is sharp." He was certainly half right, for a smooth, clean cut is very essential to the healing of the wound. But there is very great difference in the healing of wounds on account of the season in which they are made. Pruning done in March and April, especially if large limbs are removed, often injures an orchard for life. The sap oozes from all the pores and runs down the bark, discoloring it and oftentimes destroying it—called scalding. Without other protection, decay begins, and in a few years you have a hollow limb.

We like the month of June for pruning better than all others. If the work is done soon after the new wood begins to form, the wounds made by the removal of small limbs will be nearly covered over the same season they are made. The leaves make such a demand upon the wood for sap that none of it escapes from the wounded pores. It is also a favorable time for thumb-pruning. By watching the growth of the shoots upon young trees they may be brought into symmetrical shape without much use of the knife.—*American Agriculturist.*

For the New England Farmer.

ROTATION IN FORESTS.

MESSRS. EDITORS:—Stupidity must rule in the cranium of the man that does not feel a degree of enthusiasm, or an elevated reverence for that Being who administers the laws of nature, as demonstrated to the sight of every farmer who has eyes to behold "God's handiworks." Every man who has seen half a century or more, and has spent all or part of his days in the country, in the neighborhood of forests, and has been a careful observer of the progress and productions of nature, has seen a succession of the different species of forest trees, or the varieties of the same species succeed each other on the same tract of land, without man's aid or interference. When the first settlers took possession of the soil which we now occupy, they found it in some places covered with the different kinds of oak, and other hard wood, and in other places with the pine varieties, or other evergreens. After the removal of the original growth of hard wood, I have found it succeeded by evergreens. If evergreens composed the original growth, it was succeeded by some of the varieties of hard wood, or of a different variety of the evergreen from the original growth.

In the State of Maine, I have seen, on the removal of a heavy growth of beech, birch and maple, dense crops of hemlocks springing up, and in my own neighborhood, on chopping off an oak growth, a pitch pine one has succeeded, and on cutting that off, white pines have sprung up in multitudes. Every kind of soil has a constant tendency to production; even our most grain-worn fields, on suffering them to lie without cropping, are soon filled with young pines, which spring up in such numbers as to surprise us. The Almighty formed the soil for activity, as well as the animals which inhabit it, and its being destitute of the fertilizing power which produces grain, is no hindrance to the growth of the pine varieties.

The above remarks suggest that every vegetable, and every distinct species of tree, with all their varieties, flourish in consequence of a specific fertilizing principle imbibed from the earth by a peculiar set of absorbent vessels adapted to the nature and wants of each, which cause their gradual growth and ultimate maturity. On the exhaustion of the nutriment which produces one distinct species of vegetable, or tree, the nutritive principle which is required for the growth of other species is left unimpaired in the soil, to be applied when called for by others, and the earth, while in the progress of exhaustion by the production of one species of trees, or other vegetables, is accumulating a supply of nutrition which will be required by trees and vegetables of other species to promote their growth. The nourishing, elementary principle which produces the hard wood varieties, has no affinity for the evergreens, and, therefore, the evergreens will flourish after the hard wood is done growing, in consequence of the soil being exhausted of that element which produced it, and so one variety of evergreens will succeed another for the same cause.

We frequently hear complaints of the "running out," as it is called, of many kinds of vegetables, and the deterioration is supposed to be owing to a degeneracy of the seeds sown, when, in fact, it is caused by the want of the knowledge of rotation, and putting this knowledge into practice. We are taught the doctrine of rotation by nature herself, in the arrangement which she makes in the natural forests, if we would but observe her laws. All vegetables exhaust the soil in proportion to the nourishment which they afford. Oats, which are so nourishing to horses, exhaust the soil more than any root crop with which I am acquainted. I have seen four or five good crops of corn and rye grow upon pine plains, in succession, without manure, where a heavy growth of wood had been recently cut off, and but little brush left on the ground to make ashes, which is evidence sufficient to convince us that the same kind of food which feeds the forest, is not the favorite of the various kinds of grain. Thus it seems that every kind of vegetable extracts some peculiar principle of nutrition from the earth congenial to its own wants, and differing from that required by others, and this accounts for the necessity of rotation in raising our crops, if we would wish to realize the greatest profit from our labor.

Wilmington, 1862. SILAS BROWN.

WHITE-WASHING EXTRAORDINARY.

The Rev. James Williams, the well-known and philanthropic missionary, so long resident in the South Sea Islands, taught the natives to manufacture lime from the coral of their shores. The powerful effect produced upon them, and the extraordinary uses to which they applied it, he thus facetiously describes:

"After having laughed at the process of burning, which they believed to be to cook the coral for their food, what was their astonishment, when in the morning they found his cottage glittering in the rising sun, white as snow. They danced, they sung, they shouted and screamed with joy. The whole island was in a commotion, given up to wonder and curiosity, and the laughable scenes which ensued after they got possession of the tub and brush, baffled description. The high-bred immediately voted it a cosmetic and kalydor, and superlatively happy did many a swarthy coquette consider herself, could she but enhance her charms by a daub of the white brush. And now party spirit ran high, as it will do in more civilized countries, as to who was and who was not best entitled to preference. One party urged their superior rank; one had the brush and was determined at all events to keep it; and a third tried to overturn the whole, that they might obtain some of the sweepings. They did not even scruple to rob each other of the little share that some had been so happy as to secure. But soon new lime was prepared, and in a week not a hut, a domestic utensil, a war club or a garment, but was as white as snow; not an inhabitant but had a skin painted with the most grotesque figures; not a pig but what was similarly whitened; and even mothers might be seen in every direction, capering with extravagant gestures, and yelling with delight at the superior beauty of their white-washed infants."

BAROMETERS.—If our correspondent, writing from Enosburgh, Vt., will send us the facts to which he alludes, in relation to the barometer, we will publish them for the benefit of the public.

GEOLOGICAL SURVEY OF MAINE.

We find in the New York *Journal of Commerce* the annexed synopsis of the results of a partial geological survey of the State of Maine, made under direction of the Legislature by E. Holmes, of Winthrop, Me., naturalist, and C. H. Hitchcock, of Amherst, Mass., geologist. Many interesting and important facts are brought to light by the survey:

Late in the season of 1861, these two gentlemen with a number of assistants and a flotilla of canoes, explored a large district, known previously only to lumbermen. They went up the east branch of the Penobscot its whole length, explored the vicinity of Mount Katahdin, examined the country around the Allequash Lakes, descended the Allequash river, explored the St. Francis river to the State line, travelled down the St. John river from Number Eleven, or the latitude of Quebec, to Woodstock, N. B., and explored the Eagle Lakes in the north-east part of the State, making in all over 800 miles travelled in birch canoes. Besides these routes, they have also explored the whole of the eastern boundary. The results of these labors are given in an octavo volume of 400 pages. The following are some of the most interesting results of these explorations:

1. There is a fine agricultural region in this new country. The eastern parts of Aroostook county are said to be the finest portions, while no part of the whole region examined can be said to be poor; good farms can be found anywhere north of civilization. The rank vegetation of some township reservations reminded the explorers of tropical luxuriance.

Some have supposed that the climate was too severe to permit Indian corn to flourish in the northern part of Maine. But these explorers saw fields of it above the latitude of Quebec, nearly ready for harvesting. They discovered some indications of a milder climate in the extreme north. There is a belt of country from thirty to fifty miles wide in which sub-arctic plants were found, indicating cold climate. But north of this cold zone, and embracing the greater portion of the territory, were found a number of plants which no botanists had ever seen before as far north as New England or Massachusetts. Hence the agricultural region of Northern Maine was found to possess advantages over the West. The climate permits the cultivation of all the important products, and the communication with the markets is tenfold easier. Moreover, new settlers are never troubled with the Western fevers. It is one of the healthiest regions in the country, being visited in the winter by consumptive invalids even, with benefit.

A number of large beds of natural fertilizers were discovered in the eastern part of Aroostook, chiefly beds of marl, with some indications of gypsum. Many of those northern townships are held by private parties, who are opposed to the progress of civilization, because of the injury resulting thereupon to the timber lands. But the State still owns a large part of the finest agricultural districts, and it encourages emigration by granting to new settlers one or two townships every year.

2. Valuable quarries, of marble and other minerals, were found. The marble, in particular, is very abundant, and occurs in a belt of land several miles wide, running north-east and south-west, perhaps for a hundred miles. The marble is pure white, of the statuary variety. Specimens of it were shown to experienced sculptors, who declared it to be superior to the best imported marble.

Quarries of limestone for the manufacture of quick lime, and of roofing slate, were found to be abundant. A few opportunities for the smelting of iron are described. The extreme north-west part of the State, or on the upper St. John river, is pronounced to be a gold region, whose value was not determined for want of time. Suggestions are made that in the eastern part of Aroostook and the northern part of Washington county valuable ores of copper may be found.

In another part of the State this report states that a large mass of tin ore has been discovered, and that the indications for a tin mine are better than anything yet discovered in the country. It is to be hoped that this indication will bring a good tin district to light, since all our supplies of this metal are foreign.

3. Numerous important geological discoveries are noticed in the report, which are mostly of technical interest. The explorers found a highly fossiliferous region, where unfossiliferous rocks had previously been supposed to predominate. One of the new localities of fossils is said to have attracted much attention from savans already. The new belts of rocks discovered are partly equivalent of the Lower Helderberg Group and the Oriskany sandstone of New York.

The operations of the survey will be carried on vigorously the coming season. As soon as the snow is gone, an examination will be made of the wild lands bordering on Canada, from the New Hampshire line to the latitude of Quebec, a region as unknown to science and the public generally, as the Russian American possessions. Later in the season a vigilant search will be made in Washington and Aroostook counties for copper ore. Meanwhile a party of naturalists will cruise off the seacoast the whole season, collecting specimens of marine animals by dredging and with lines, as well as visiting many points and islands rarely explored.

GOOD TASTE.

Good taste is the "luminous shadow" of all the virtues. It is social discretion, it is intellectual kindness, it is external modesty and propriety, it is apparent unselfishness. It wounds no feelings, it infringes on no decorums, it respects all scruples. A man thus gifted, even though he be not a wit, spreads a genial influence about him from the trust he inspires. The stiff man can unbend, the cold can thaw, the fastidious can repose on him. No one is committed to more than he chooses—no ungenerous use is made of an unusual or transient impulse. Good taste is practical, though not deep, knowledge of character; it is perception of the distinctive points of every occasion; and thus it reconciles and harmonizes where bad taste perpetuates differences and necessitates separations. And yet we by no means wish to make good taste a synonym either for virtue or intellect—it is rather that quality which sets off both at their

best. It is an affair, in some degree, of social training—it is one aspect of knowledge of the world. Those who are little in general society—who confine themselves to family intercourse or to that of a set or clique, whatever the position, whatever the intellectual or moral pretensions of that clique—are almost sure to fail in it in new scenes. All persons of a single idea, engrossed by one object, are perpetually infringing on the rules of good taste. If they are religious, they are pragmatical and intolerant, regardless of sensibilities. If they are useful, they do their work with unnecessary fuss. If they are learned, or deep, or clever, they make these good gifts unpopular. If they are merry, we are kept on thorns—if they are grave, they are a check and restraint. They fail in every social crisis. In every difficulty they take the wrong way. They are forward when they ought to be retiring—their diffidence is constantly misplaced. There is no knowing where such people are—to what lengths an emergency or excited spirits will drive them. It is the cause of half the seeming injustice of society. The man of bad taste cannot comprehend why things are not tolerated in him which are allowed in others. He is the last to see that the presence or absence of a correct taste makes the same practice or amusement agreeable or repugnant—that nothing can be judged fairly without taking the manner of doing it into consideration. He is therefore for ever grumbling at the inconsistencies of mankind. The fact is, every hinge, with some people, grates and creaks, at each turn jarring on sensitive nerves; while good taste is the oil which keeps the machinery of society, with the least wear and tear, noiselessly and profitably at work.—*London Saturday Review.*

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

Sparks from a Locomotive Farmer.—A short time since the writer enjoyed an hour's railroad ride with that well known and well to do Essex farmer, Mr. John Day, of Boxford. Whether or not the hour was well improved, let the reader judge, after glancing at the following "sparks."

How he Started.—Mr. Day commenced as a farmer by taking a small farm to "carry on at the halves." He commenced without any capital whatever, except his own hands and *brains*. For twenty years he gave particular attention to raising grass for the market, and during all this time he annually sold nearly his entire hay crops. Notwithstanding this exhaustive process, his land actually improved year by year, so that where he at first cut only ten tons of hay per year, he has for the past twelve years averaged *one hundred tons* a year!

How he did it.—In the first place, he annually used, and still uses, large quantities of peat muck. This he composts with anything and everything he can get hold of that will assist in its decomposition. He has it constantly in his barnyard, in his pig-pen and in his barn-cellar. He adds two cords of muck to every cord of manure dropped by his stock; one cord to every four bushels of wood ashes he can collect; large quantities to the contents of his privy and his hennery; and in this way he annually collects pretty large heaps of manure. But not satisfied with this, he is constantly purchasing manure, and also the various other fertilizers, such as lime, gypsum, superphosphate of lime, guano, ashes, &c.

How he Manures.—He adopts the plan of a four years' rotation of crops—first year, corn or potatoes; second year, grain; third and fourth years, grass—and applies twenty cords of manure per acre to the planting crops. He thinks that one-third muck and two-thirds stable manure makes the best fertilizer for general purposes he ever used. He had rather have a cord of muck well composted with four to six bushels of wood ashes than the same bulk of clean stable manure. He thinks that no farmer, who has muck within reasonable distance, can afford to sell his wood ashes for less than one dollar per bushel, or leached ashes for less than fifty cents per bushel. He values coal ashes very highly, as an absorbent. He values sawdust at one dollar per cord, for the same purpose. He can't afford to shovel loam for compost, if he can get muck instead.

His Crops.—For twelve years he has averaged from eighty to eighty-three bushels of shelled corn per acre. He now plants only the twelve-rowed corn, as he has found by experience that the same land and labor that will give him eighty bushels per acre of the twelve-rowed, will not give him above sixty bushels of the eight-rowed variety, and he thinks twenty bushels bonus worth having. He has now under cultivation only thirty-nine acres of tillage land, and he keeps twenty-five cows, six oxen and two horses. He raises and *feeds on his place* about 1000 bushels of grain annually. He can't afford to sell it. (He sells large quantities of milk.) He don't think meadow hay is worth harvesting. It is only fit for bedding, and he had rather have sawdust for that purpose.

Breeds of Cows.—He has tried various breeds and crosses for *milk*, and has concluded that as a general rule the half-blood Durhams are decidedly the best for milk *sellers*. They give a large quantity, and of a good color. The Jerseys he thinks are an excellent kind for a single family cow. The Ayrshires are desirable where a great quantity of milk is wanted.

Milk versus Water.—He found by actual measurement the past winter that during a period of two weeks, in which his cows were not once allowed out of the barn, they drank an average of forty-six quarts of water per day each; while for the week following, during which they were daily allowed several hours in the yard, the consumption of water was not more than one-half as much, and the gross product of milk was four gallons less per day. One reason for this difference, he thinks, is found in the fact that when his cattle are in-doors, they are quiet, warm and contented; but when turned out, they are apt to be restless, cold, and perhaps worrying one another. Under the latter circumstances they seem to eat more, but drink less. He allows his cattle free access to salt at all times. Both coarse and fine salt are kept constantly within their reach.

Sorghum.—He thinks that our New England farmers will in time make all their own molasses. He has proved that he can make as good an article as he can buy, and at a cost not exceeding twenty-five cents per gallon. At first, he was

troubled about grinding the cane, but he has now a mill, of his own make, which works perfectly. With such a mill he could grind all the cane for a large number of farmers, and at a lower price than they could do it themselves. He doubts if we can make much sugar from the cane so far north as this, except in very favorable seasons.

For the New England Farmer.

CROWS---CROWS.

"Those intelligent, interesting, and mischievous black rogues."

We often hear the remark made that crows do more good to the farmer, than they do harm; and sometimes we find the same idea expressed in print. It is said they destroy insects; and they feed on the bodies of dead animals, thus preventing them from putrefying, and poisoning the air. Now I think there is no good excuse, in this part of the country, at least, for the body of any dead animal to lie on the surface of the ground; it should always be buried. Perhaps where the country is sparsely inhabited, and wild animals abound, which may die, or be killed, they may have been of some benefit. The damage done by the crow to the farmer's corn crop alone, exceeds the benefit derived from them in the destruction of insects.

I wish to relate some experience in this line. For a number of years previous to 1860, right in the face of all the scare-crowing I could do, these black thieves did me more than ten dollars worth of damage yearly. I tried many things to keep them off; a bough house made of pine boughs, with a "stuffed man" in it, which sometimes is effectual, was of no use. I hung up dead crows in the field, and they would pull up the corn within two rods of them; I tried a line around the field, fastening it to poles eight or ten feet from the ground, and they would go down into the middle of the field, and pull it up the faster. I was forced, in order to keep them off, to watch the field right in the midst of planting, when time was worth more than money. One year I planted a half acre rather late, and being from home a day or two, they dug out, and pulled up the largest share of it. And yet they have not served me as badly as they have some others. I know a man who cultivated land a mile or so from where he lived. He manured a field bountifully, and planted it with corn. In a short time he went to look at his springing corn, as he fondly anticipated, when lo! it was all pulled up! He planted it the second time, and the second time it was all pulled up; then it was late; he must plant it with potatoes. He was a poor man; this was all the corn he planted. Now let any crow-fancier have such an experience as this, and I have no doubt it would cure him of his partiality for the black rascals.

In the spring of 1860, I planted a field of about an acre and a half with corn; two or three days after finishing the planting, I went to the field, and found that the crows had begun to dig it out. I took some small stakes, four or five feet long, and run a line around the field; also up through the centre, then crossed it several times on the upper end, where the crows had begun to work. The next morning I went out to the field, and up flew an old crow from between the twines at the lower end. There were some twenty or thirty hills dug into. Wishing to ascertain if twine could be put on so as to keep them off, I bought a ball containing about half a mile in length, and wove it all on; they did not go on to the field again.

Last year, as soon as our corn was planted, the twine was wove on; and although crows were about pretty plenty, it escaped damage, being "let alone." The crows would fly along with a "caw, caw," in their peculiar, warning note.

I have noticed in the spring, when crows pair off, and separate from the return flock, to build their nests, they appear to have a kind of division of the land, so that each pair have their particular fields to themselves; and although before they roamed peaceably over the whole, in common, now one pair will not let another transgress their bounds.

Crows possess some good traits; they exercise benevolence towards one another, as well as affection for their young. I saw one in a flock that was disabled, and hopped on one leg; others in the flock would get food, and carry it to him. I got a nest of youug crows, one spring, from a wood nearly a mile off; they were almost ready to fly. Knowing that there was a nest in a small piece of woods not far from the house, I took one of them, tied a string to its leg, and made it fast to a stake, out in a lot, then watched to see what would happen. In a short time an old crow came flying over; the young one saw her, and cried for help; the old one answered, but still kept on, and afterwards returned to her nest. The next time she came over, the young crow called louder than before. The old one circled around, and lit on the fence a short distance off, and after some manœuvreing, she went to the young crow, and tried to liberate him by picking at the string. Not succeeding in this, she went off, and soon returned with something for it to eat. She continued to do this, going four or five times to her nest, and then returning to my prisoner. I now took my gun, went out, and lay in ambush. In a short time she came with her mouth full, lit a short distance from her charge, and ran towards it; just before she reached it, I fired; she rose up, perhaps three feet from the ground, and flew fifteen or twenty rods directly towards her nest, and dropt dead. Was I cruel? Would not the reader like to hear that Floyd had been shot? Well, this black rebel stole corn right from my neighbor's field, every kernel being worth more than a hundred-fold to him.

Laying aside all other charges, there is one way in which I consider that crows do the farmer more injury, than all the good they can possibly do in every way. That is, in their destroying the young of other birds. It is well known that the young of domestic fowls are taken whenever they come in their way; then just consider how many of the young of harmless and useful little birds must fall a prey to their rapacity, when there is hardly a nook or corner, a tree or bush, but what they scour in search of plunder.

Birds that beat the crow, will not allow one to come near their nests. A pair of king-birds have built their nest on an apple tree near the house for a number of years, and there are always two or three nests of other birds on the same tree, though there are other trees near by, that they might just as well build on. Is it not for greater safety that they build there? If a crow comes within an

eighth of a mile of this tree, you hear the warning note of the king-bird, who immediately gives chase and drives him off.

In destroying insects on a farm, I think that turkeys might be kept to much better advantage than crows. I had rather raise a dozen turkeys on my place, than a dozen crows; and how different the footing up sounds, in the fall, of the two investments; in the one case the music has been all addressed to the ear, and pitched to the tune of innumerable "caw, caw, caws;" in the other, the pocket is replenished with the musical jingle of ten or twelve dollars, and a Thanksgiving feast into the bargain.

The flock of crows that return to this part of the State, annually, in the spring, has been slowly decreasing for several years; I should think that last year they might have numbered twelve or fifteen hundred; the use of strychnine, no doubt, accounts for this decrease in a great measure. I should rejoice to spare ninety-nine one-hundredths of the remainder. Can any man benefit the public more by the use of twenty-five cents, than by purchasing that worth of strychnine?

Worcester, 1862. L. R. E.

For the New England Farmer.

IMPROVED STRAW HIVES---HOW MADE.

Having succeeded in constructing a hive of straw, adapted to improved bee-culture, making it take and retain a shape suitable for movable frames and surplus honey-boxes, I announced it in the *Farmer* some months since, and at the same time an invitation was given for some one to give us a better form, as I did not suppose that I had the best one. Since that time, two straw hives have been patented, but whether they are sufficiently superior to mine to pay patent expenses, is not for me to say. Both of them have movable frames. One patented by Mr. M. Stilwell, Manlius, N. Y., very much like mine; the material difference is in the manner of securing the straw. Mr. S. Ide, East Shelby, Orleans County, N, Y., has one with double walls, with an air space between; the inner one of straw, the outer of wood, which serves to protect the straw from the weather, and as far as the sides of the hive are concerned, would do a great deal to protect the bees, and keep out the frost. It is well made, durable, and somewhat costly. The one I have is more simple, easier made, and probably may answer just as well. It is made to correspond in respect to heighth, length and breadth, to a wood hive that I have, with movable combs, so that the combs, bees, &c., may be transferred at any time. I would suggest that any one disposed to make the straw hive, who already has the movable combs, that they make it the same size of the wood hive, inside measure of course, as the straw will be much thicker than boards. It will be unnecessary for me to describe the frames, manner of supporting them, or size of the hive.

To make the hive, take strips of board, say one inch thick by two inches wide, and make two rectangular frames, halving or framing the corners together, and keeping the under surfaces in the same plane. These frames must be of the same size, and of dimensions according to the size of the hive required. On the under side of the bottom one, cut a passage way for the bees, three inches wide by three-eighths deep. Lay this on the bench before you, and nail to it upright strips of lath—let them be an inch wide by one-fourth inch thick—the length corresponding to the height of the hive, the lower ends being even with the lower surface of the frame. If very smooth work is desired, these laths may be let into the frames just their thickness. When to be painted, it should be done before filling in the straw. These laths should be about four inches apart, inside and out, the two at the corners joining together. Now take long, clean straw. Rye straw is the smoothest if unthrashed, the better; get it even, and cut off the head, wet it and lay it between the upright pieces of lath, bending it round the corners in such a way as to make the walls of the hive, and press it close. When half full, if the hive is a deep one, pass some small annealed wire around the inner and outer lath, to keep them from spreading. Having pressed the space full, lay the second frame upon the straw directly over the first, nail the upper ends of the lath to it, and the hive, with the exception of the top, is done. Such a hive should have two tops, movable, of course, as in all movable comb-hives; one of wood, to be used during the gathering of surplus honey, and the other of straw, for winter and spring. This straw top may be made on the same principle as the hive. Make a frame of the proper size, and two inches deep; nail pieces of lath on the under side, sinking them in so as to leave a level surface, fill in above them with straw, and bind it down with lath nailed above. It will be unnecessary to leave any passages for ventilation, and as the wood top is used in the honey season, no holes are necessary in the straw top, to communicate between the boxes and hive. Allow the hive to dry out as fast as possible, and when dry, it is ready for the bees. They may be transferred at any time. If the weather is cold, take them into a warm, dark room, using a candle to work by. Such a hive, with no ventilation but that afforded by the porous absorptive mass of straw of the side and top, has been found free from frost, and the bees in very comfortable condition, when the thermometer stood at 10° below zero. As I have heretofore given my views relative to the advantages of straw hives in the *Farmer*, I will not repeat them here. M. QUINBY.

St. Johnsville, N. Y.

DRYING UP.—A letter from a gentleman visiting the oil region in Pennsylvania, dated at Oil Creek, April 13, confirms the recent reports as to the great decrease in the produce of the oil wells. On his arrival there about two months since, one well flowed 1200 barrels in 24 hours. On the 12th inst., it yielded but 300 barrels in the same period. Six other wells, which on his arrival yielded 400 barrels each in 24 hours, now yield respectively 150, 100, 80, 40, 20 barrels, and the sixth none. Another well which then yielded 550 barrels, now produces not a drop. He says, however, that new wells are daily being sunk further up the creek, were it not for which, he thinks the supply would soon give out, and as it is, he is of the opinion that oil will soon be scarce in that region.—*New Bedford Standard.*

For the New England Farmer.

PROPER LOCATION OF BUILDINGS ON THE FARM.

Most of the readers of the *Farmer* have doubtless often been struck with the want of taste or judgment displayed in the relative position of farm-houses and out-buildings connected with them. This is not, however, the subject I propose to consider in this article, but leave for others to dispose of, if it has not already been done, to their entire satisfaction. I now wish to bring forward what I consider a more important matter, viz: The location of farm buildings so as to secure the greatest economy in all our farm operations. That this is lamentably overlooked, we have abundant evidence on every hand.

A year or two since I rode out of Boston a few miles to look at a farm that was offered for sale, very cheap, I thought, from the description given. When I arrived on the premises I found a noble farm of 200 acres of excellent land, compact, and all readily covered by the eye from the centre of the farm, affording a fine prospect of the surrounding country. All that was wanting to complete the picture, was the farm buildings, which were located on one corner of the farm, by the highway, and consisted of a new house, costing over $5000, an old barn, corn-house, carriage-house, &c., not worth to any one over $500, and for which and proximity to the highway the house was located, and the profitable working of the farm sacrificed.

As these buildings were located, all the teaming to be done upon the place was at great disadvantage, involving unnecessary distance, up-hill road, and of course more strength of team. In the case of this farm, if the buildings were placed upon the summit, which was near the centre, the farmer could overlook his place; anything out of bounds would be quickly known and readily attended to; his manure easily distributed, and his crops economically gathered. All these considerations seem to have been overlooked, or sacrificed, for the sake of the old shanties by the highway, and having the house convenient to them.

In another instance, I went to view a farm of over 100 acres, and found it extending back from the road three-fourths of a mile, up quite a steep grade. The road front was narrow, and the house an old, poor thing, on a line with the road, if not partly in it, near by which a new and expensive barn had been built.

What judicious farmer would buy farms with buildings located as those described above, unless at such a price as to admit of his revolutionizing the whole arrangement? A great propensity prevails in New England to locate houses near the public highway. The eligibility of other parts of the farm is ignored, and its value sacrificed for this seeming advantage. If the road should pass through near the centre of the farm, very well; but even in this case, have a good spacious lawn and carriage-way in front, trees, shrubs, evergreens, &c., for surroundings, and you add greatly to the estimate the observer will place upon it.

But we cannot now alter our present arrangement without serious cost, exclaims many. No doubt of it, so far as most farmers are concerned. My object is to direct the attention of those who propose to erect new buildings to the importance of putting them in the right place. Don't let an old shell of a barn induce you to put a new house near it, unless it is, all things considered, the very best place. In the case of the two farms I instanced above, I estimated the additional, needless expense for labor and team, as equal to that of one man and a yoke of oxen or a span of horses. How much this would amount to annually, all can reckon for themselves, according to the value of such labor in their several localities.

You who are contemplating building, ponder these suggestions. O. K.

Rochester, Mass.

For the New England Farmer.

PLAN OF A SHEEP BARN.

Having seen in your columns a call for a plan of a sheep barn to be situated on level land, and of ample capacity to accommodate 200 sheep, I offer the following: I would build it 32 feet wide, and 75 feet long, and divide into bands of 15 feet each, the divisions being made by running foddering racks cross-wise the building. Each of these apartments will accommodate 40 sheep, giving each, one and one-half feet while at the racks. In the centre of the front of each of these apartments there should be hung a door, from six to eight feet wide, which may be left open or closed at will. In the centre of the back of each apartment there should be a window made to slide back and forth, which should be left open during mild weather, but closed when the storms beat. In speaking of the doors, I should have said that the middle band requires a door as large as those of a common barn, so that hay may be driven in through them. A water tank should be placed at the end of every other rack inside the building. This barn should stand fronting the south or south-east, and there should be a separate yard for each apartment, in which the sheep may sun themselves. The height of the sheep-room should be eight feet, and that of the hay-loft six feet to the foot of the rafter. Eave spouts are required on the front side of the barn to prevent the water dripping on the sheep during a thaw or rain storm.

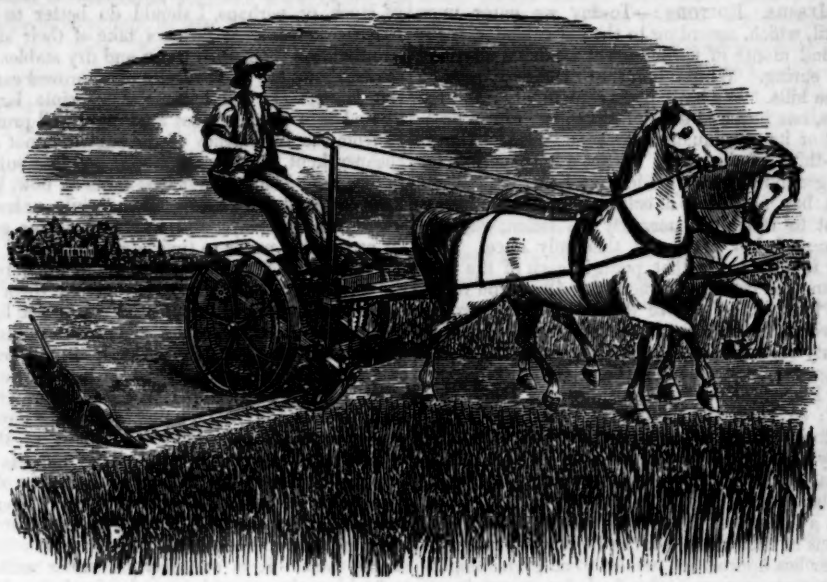
The prominent advantages of such a barn are these:

1. You can feed under cover at all times.
2. The sheep and their fleeces are thereby kept dry; otherwise, both are greatly damaged.
3. One is put to no inconvenience in clearing the racks of snow after a storm.
4. A greater amount of better manure can be made; better, perhaps, because better preserved. Two hundred sheep kept in a barn of the above description, and occasionally littered down with straw, say enough to keep them clean and dry, will make a great amount of the very best manure.

GEORGE CHALMERS, JR.

Newbury, Vt., 1862.

REMARKS.—We regret that a few lines connected with the above article have been lost. They were on a separate piece of paper, and were either not enclosed by the writer, or have been mislaid since. They related, merely, to some of the advantages of the barn which he has described.



THE UNION MOWING MACHINE

This Machine was introduced to a limited degree, last year, and in accordance with our custom of giving our readers such information as is in our power in regard to new implements for forwarding farm labor, we publish the above cut, and give a plain description of the Union Mower.

The machine weighs about 550 pounds, sets upon two driving wheels, either one of which operates the knives when the machine is in motion. Inside of the circumference of the driving wheel is a smaller ring, furnished with cogs upon its inner side, which cogs act upon a pinion at the end of the shaft, passing from one wheel to the other. On the shaft nearly under the seat, is another wheel, with cogs upon its side, by means of which motion is communicated to the crank shaft which carries the knife bar. The machine is thrown out of gear by a simple arrangement which can be operated either by the foot or hand of the driver, and the whole finger bar, with knives and all, can be lifted by means of the lever in front of the driver's seat, so as to pass any obstruction. There is a hinge at the heel of the finger bar, allowing it to be lifted into an upright position, where it is held by a little catch of iron, in which position the machine can be drawn along the road or from field to field. The knife bar, instead of sliding upon the surface of the finger bar, is slightly raised from it, being supported at four or five points by narrow pieces of steel secured to the face of the finger bar,—thus lessening the friction,—and the inner face of the fingers is made of steel. The general appearance of the machine is very much like the Wood Mower, and its weight is about the same. Of course it has points of difference, or it could not be patented.

Of the working qualities of the Union Mower we are unable to speak, as we have never seen it in operation. It deserves, as does every machine, a careful examination, and it will take just that position in the estimation of the public which it is entitled by its merits to occupy. No one should purchase an article so costly and of so much importance as a mowing machine, without carefully setting the question in his own mind of the relative value, *for his use*, of the various machines now before the public. The Union is advertised in our columns, and our readers are referred to the advertisement of the manufacturers for full particulars

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Weight of Manure.—A solid foot of half-rotted manure will weigh, upon an average, 56 pounds. If it is coarse or dry, it will average 48 pounds to the foot. A load of manure, or 36 cubic feet, of first quality, will weigh 2,016 pounds; second quality, 1,728 pounds. Weight to the acre —eight loads of first kind, weighing 16,128 pounds, will give 108 pounds to each square rod, and less than 2½ pounds to each square foot. Five loads will give 63 pounds to the rod. An acre containing 43,560 square feet, the calculations of pounds per foot, of any quantity per acre, is easily made. —*Plow.*

For the New England Farmer.

THE WINTER OF 1861-2.

MESSRS. EDITORS:—To-day we enter upon April, which, according to the old calendar, is the second month of spring. Yet we have anything but spring. Winter holds a princely reign upon these hills. We have had three months and ten days, one hundred days of sleighing, with a prospect of its continuance for some days. Almost one-third of the year! What a long period for the ground to be buried in snow!

It has not been a cold winter. The lowest point to which the mercury has fallen, was five degrees below zero, and this only once. Last year it sunk below that point in each of the winter and the first spring months. Once, you recollect, from ten or twelve degrees above freezing, in twelve hours, it went down, down, with us, to twenty-eight below zero. This was a rapid and extreme change, and that the coldest morning we ever knew; we said the fruit was used up for that year; so it was, and the old trees were nearly used up, too. So fatal were its effects on them, that many an old orchard has been pruned by cutting down. This year, the trees that remain, we think, will bear fruit. What a luxury it will be, to again have a full supply from one's own orchard. The visions of health and comfort lie in the idea. The winter has approached nearer to an even temperature than any we have had for many years. There has been no very cold weather—none very warm. Our thaws have been short, and of little effect. But very little rain has fallen, and this has mostly congealed as it fell, so that ice on the trees has followed. We have had several hail or sleet storms from the east, and these were usually attended by high winds, so the material was driven into very compact drifts. In the woods these storms formed a crust, very annoying to teams.

The quantity of snow, hail and sleet that has fallen has been large; not less than four or five feet. Much of this material still remains. The roads are full, the fields are thickly covered, and the quantity in the woods is anything but comfortable to man or beast. It is wasting away, but not fast enough to raise the streams at all.

The season has been remarkable for high winds. On the evening of January 1st, the wind, after a pleasant day, sprung up in the north-west and blew a tempest through the night. It was a fatal wind to some apparently strong buildings. The 27th of February was thawy from a south wind and some rain in the early part of the day, but at three o'clock, in the afternoon, the wind came round to the north-west, and attended with a violent fall of snow, blew a tornado through the night. The result was, several buildings were blown down, and the roads and railroads blockaded, so that the cars met with serious detention. But two days of calm coolness elapsed, and Boreas started his blast again, and a new and more effectual blockade was laid, in consequence of which the mails were delayed forty-eight hours.

We have alluded to the hundred days of sleighing. This reckoning includes it only from December 20th to the present time, to which add twelve days of sleighing the latter part of November and early in December, and we have had one hundred and twelve days of moving on snow. Ten days more will fill up a third of the year. Present appearances favor its continuance for that time.

The winter has been very favorable to all kinds of stock, or, perhaps, I should do better to say, that the better care farmers take of their stock, by providing them with warm and dry stables and sheds, shows the good results of improved care in the matter. It has become a principle largely carried into practice, that an animal well protected from the inclemency of the season, is not only cheaper kept, but is more docile and less subject to disease. Many of our best farmers, now, keep their cattle stabled nearly all the while, unless in warm, sunshiny days, and, in severe storms, go so far as to carry water to their stables.

Warm stables and sheds are doing wonders for the comfort of animals; but in giving them the stables we have been too apt to exclude the light, a quality as essential to animals as it is to plants, and we all know that plants will lose their health and hardiness if grown in the dark. Further, a window in the south part of a stable operates essentially to modify the temperature. The days of winter, we know, are short, and many of them are darkened by clouds, yet light in itself is the herald of warmth, and a little sunshine on a sheltered spot improves the temperature. Then an animal that can see what is going on in the stable loses much of the fear that results from a noise in the dark. It is certainly pleasanter milking and taking the general care of animals in a light stable than in a dark one. No stable is right without its windows. WILLIAM BACON.

Richmond, April 1, 1862.

EFFECTS OF THIRST.

The oxen had now been four days without water, and their distress was already very great. Their hollow flanks, drooping heads, and low melancholy moans uttered at intervals, told but too plainly their misery, and went to my heart like daggers. My poor horse was no longer an animated creature, but a spectre of himself—a gaunt, staggering skeleton. The change that had come upon him within the last twenty-four hours was incredible. From time to time he put his head into the wagon into any one's hands, and looking wistfully and languidly into his face, would reproachfully (his looks conveyed as much) seem to say: "Cruel man, don't you see I am dying; why don't you relieve my burning thirst?" The dogs, again, ceased to recognize my caress. Their eyes were so deeply sunken in their sockets as to be scarcely perceptible. They glided about in spectral silence; death was in their faces. The wagon was heavily laden, the soil exceedingly heavy, the sun in the day-time like an immense burning-glass, and the oppressiveness of the atmosphere was greatly increased by the tremendous "veldt" fires which, ravaging the country far and wide, made it like a huge fiery furnace.—*Anderson's Okavango River.*

THE WIRE WORM.—At the discussion of a farmers' club in Buffalo, Ill., Mr. Franklin Reed said that the ravages of the wire worm could be prevented by putting half of a fresh cob in each hill. The worm would work into this and leave the corn.

NEW YORK STATE SOCIETY.

Through the kindness of its accomplished Secretary, B. P. JOHNSON, Esq., we have before us the twentieth volume of the *Transactions of the New York State Agricultural Society* for the year 1860. Like many of its predecessors, it abounds in valuable statistical information in relation to the condition of agriculture, from nearly every portion of the State, and is illustrated with well executed engravings of animals, insects and agricultural implements and machinery.

Among so much that gives the experiences of practical men, it is difficult to select and comment. At the evening discussions during the State Fair a variety of subjects were discussed. That upon the Indian corn crop is quite interesting. Several of the speakers, men of large experience, stated it as their opinion that this crop *is the most profitable* of any of the large farm crops. Mr. T. C. PETERS, of Genesee, said he had tried an experiment to determine the relative value of corn-stalks and Timothy hay. Both were chopped and steamed. The cows having the *corn-stalks* gave the *most milk*. He also states what we have often urged upon the reader, that the ground and manure where we expect good crops should both be very fine. Mr. Peters says, "The great secret of success in corn culture is to have the ground made very fine before planting." In company with two other persons, last summer—both very observing and intelligent men—we examined the soil in a field of corn, and came to the conclusion that there was scarcely an inch in the whole field that was not a complete network of corn roots. These roots were exceedingly small and delicate, but so numerous as to hold the soil together so firmly as to require some jarring in order to shake it out. How important it is, then, that the soil into which these delicate roots are to run and seek support, should be fine and moist!

When the subject of sheep husbandry was discussed, Mr. JOHN S. PETTIBONE, of Vermont, said that one great secret of success was the *personal attention* given to flocks—he never knew a man to look at his pig while it was feeding unless it was fine and fat—the man who has poor animals always gives the food and then runs away! He always keeps his best sheep.

Mr. BAKER, of Urbana, maintained that "there is nothing like a flock of sheep to keep up the fertility of the land. Says he has kept 800 sheep a year on something less than 200 acres of land, including the hay and pasture for them; and has made the land so fertile as to raise 120 bushels of shelled corn on an acre. He feeds potatoes, beets, or carrots, to the ewes, twenty days before lambing, and regards potatoes as the richest food, and beets the easiest raised on his land."

Mr. ROBINSON, of the New York *Tribune*, being called on to state what sort of sheep sell the best in the New York market, said, "South Down sheep always outsell every other variety, to the first-class butchers, but they are not appreciated by the wholesale butchers, who are mostly Irish and Jews. The next most profitable breed for the New York market is the long wooled, heavy carcass sheep." Early lambs will sell for five dollars a head, and later ones for three dollars, if fit for the butcher.

The next paper is upon *Experiments with Different Manures in Permanent Meadow Lands*, meadow here meaning our common upland mowing lands. The first broad conclusion arrived at is, "that it has been shown that the produce of hay on permanent meadow land was more than doubled by means of manure alone."

The reports on farms and the dairy contain valuable suggestions and details of practice. Under the caption, "*Abortive Cows*," six or seven causes are stated that might cause this calamity. These are common things, such as fright, worrying by dogs, hooked by master cows, &c., but the conclusion arrived at is, that, after an examination of all the facts presented, there is good reason to believe that the cause of this disease lies beyond the exciting causes above enumerated. This is a comparatively new habit, is altogether more extensive than farmers generally suppose, and is making sad inroads upon the profits of cows in our own State. There ought to be a thorough investigation of the disease and its causes, by some persons competent for the task.

This volume contains, also, the sixth report on the noxious and other insects of the State of New York, by ASA FITCH, the entomologist of the State Society.

We have been interested and instructed by looking over the pages of this excellent volume, and cannot withhold an expression of gratitude to the State, to the members of the Society, and to the energetic and indefatigable Secretary for sending to the public, annually, a volume so progressive and practical in its character.

SCARCITY OF PURE ARABIAN MARES.

The Arab's love for their mares, and the jealous care with which such animals are treasured in the East, have formed the subject of many an interesting story. There is no difficulty in obtaining any number of Arab stallions, for example, of the very purest blood; but it is next to impossible to procure an Arabian mare of very high reputation. A modern writer on the subject tells us that it is even considered a crime to sell one under any circumstances; and in proof of the resolute opposition to the practice, a case is related as having lately occurred in Calcutta, where some Arabian dealers had sold their horses, and in consequence of a heavy bribe one was induced to part with his mare. Some weeks after, when the dealers had

already gone homeward, the senior of his party was observed to have returned to the city, a distance of several hundred miles; he lurked about for some days; subsequently it was discovered that he had inquired for the stables where the mare was kept; she was found poisoned, and he had disappeared.

For the New England Farmer.

HUNGARIAN GRASS.

MY DEAR BROWN:—I notice in your paper of March 29th, an article on Hungarian Grass, and as all subjects have two sides, it is perfectly proper that both should be presented.

This grass was introduced into our vicinity some few years since, and so loudly were its merits proclaimed that many of our farmers were induced to test its value on their own premises. Being as ignorant of the market price of seed as they were of the value of the article it would produce, they purchased at double the above price, and ventured on the experiment. "Hungarian grass" was then the idea of the day. Mark the change! Last year there were but two individuals, so far as we were informed, engaged in its culture. One of these had a very small patch, the other was a dealer in the seed. The opinions of our farmers go to show that, in their view, it will not pay. We have no doubt, however, but there may be circumstances under which it will pay. What these are, we don't know. The farmer must find out for himself. He is the proper judge in the matter.

But to the objections. It is an annual. Of course it must be resown each spring. Consequently, the ground must be plowed and harrowed—a labor that is not required for the common grasses. Mr. Richards gets "from 1½ to 4 tons an acre." Here is quite a difference in yield, probably caused by the quality of land, amount of labor, and manure, and seed bestowed. The plowing, sowing, harrowing and cost of seed cannot be dispensed with. They are so many extras for the crop. If the same quantity of manure which is necessary to carry the quantity of crop from 1½ to 4 tons on an acre is applied a top-dressing on the meadow, is it not probable it will increase the quantity of good Timothy and red-top in about the same proportion? We think it would, for manure has a wonderful faculty of making these grasses grow, and to make a beautiful, fine hay, that all the cattle and sheep love, and that they will thrive upon. We should decidedly prefer this hay, for our stock, to the Hungarian, and so our farmers decide, who have tried both.

Then, the seed—"from 15 to 25 bushels, weighing from 44 to 48 pounds per bushel." Allowing 25 bushels to the acre, at 44 pounds per bushel, you have 1200 pounds of Hungarian seed to an acre. Add to this Mr. Richards' 4 tons of grass, and you have 9200 pounds, the product of your acre. Eight thousand of this is stalks and leaves. We leave it to the observing farmer to decide the quality of this amount of stalks and leaves, taken from an acre of land. He, too, can decide whether it would be of a quality of food satisfactory to his animals, and what the exhausting power of such a crop would effect on his land.

We have placed the most liberal estimate on the produce of this crop, on an acre of land. The lower estimates are a ton and a half of grass; fifteen bushels of seed per acre. Any farmer can judge from the extremes of production of other crops, which of these will approach nearest to an average.

"It requires much more drying than herdsgrass does, when cut in bloom." Here, again, is extra labor and risk of weather brought into the expense of the crop. How far all these extra expenses and risks will go to diminish the value of the crop, is a matter of consideration to the farmer, and should be duly estimated before he risks too much. If the author of the article had given us the expense of the crop, such as rent of land, manure, seed and labor, and the value of the crop by the ton or bushel, in comparison with herdsgrass or redtop, and the seed, as compared with oats or buckwheat, he would have given your readers a much better clue to the value of the crop.

"His horses and cattle are as ready for this, when well cured, as they are for other good hay." Ours are as ready for good oat straw, when properly cured, (especially if, like the Dutchman's wheat straw, it is very poorly threshed,) and if fed to them in proper times, as they are for hay. So with corn-stalks, if they are well cured and properly fed, cattle will thrive on them, horses like them, and are benefited by eating them, and great burthens, both of the oats and corn-stalks, can be taken from an acre. Yet we do not recommend them as crops for general culture for the fodder they will produce, though we fully believe that an acre of oats, under equal circumstances, would give a much better return in amount and quality of fodder, than an acre of Hungarian grass, and we doubt not but experience would confirm this opinion with every unprejudiced farmer.

ANON.

April 1, 1862.

THE CORAL.

Prof. Agassiz discourses principally concerning the Coral in the May number of the *Atlantic*, relating several interesting facts:—

It is well known that all animals and plants have the power of appropriating to themselves, and assimilating the materials they need, each selecting from the surrounding elements whatever contributes to its well-being. The plant takes carbon, the animal takes oxygen, each rejecting what the other requires. We ourselves build our bones with the lime that we find unconsciously in the world around us; much of our nourishment supplies us with it, and the very vegetables we eat have, perhaps, themselves been fed from some old lime strata deposited centuries ago. We all represent materials that have contributed to construct our bodies. Now Corals possess, in an extraordinary degree, the power of assimilating to themselves the lime contained in the salt water around them; and, as soon as our little coral is established on a firm foundation, a lime deposit begins to form in all the walls of its body, so that its base, its partitions, and its outer wall, which in the Sea-Anemone remain always soft, become perfectly solid in the Polyp Coral, and form a frame as hard as bones. It may naturally be asked where the

lime comes from in the sea which the Corals absorb in such quantities. As far as the living Corals are concerned, the answer is easy, for an immense deal of lime is brought down to the ocean by rivers that wear away the lime deposits through which they pass. The Mississippi, whose course lies through extensive lime regions, brings down yearly lime enough to supply all the animals living in the Gulf of Mexico.

As soon as the little Coral is fairly established, and solidly attached to the ground, it begins to bud. This may take place in a variety of ways, dividing at the top, or budding from the base, or from the sides, till the primitive animal is surrounded by a number of individuals like itself of which it forms the nucleus, and which now begin to bud in their turn, each one surrounding itself with a numerous progeny, all remaining, however, attached to the parent. Such a community increases till its individuals are numbered by millions; and I have myself counted no less than fourteen millions of individuals in a Coral mass measuring not more than twelve feet in diameter."

For the New England Farmer.

PLOWING SONG.

Cheerily, brothers, lift your song,
Let us be blithe and gay!
Gladly the hours should speed along,
For we are plowing to-day.
Drawing the furrows we go,
Full, and straight, and deep;
Mother Earth's bosom the seed will keep
Snug and warm, where the life-springs leap,
Whence a rich harvest shall grow.

Yes, we are plowing again to day,—
Hopeful, and stout, and strong;
The years glide by, we are getting grey,
But in heart we are brave and young!
Steady and brisk we go,
Though the way be sharp and steep,
For mother Earth's bosom, so safe and deep,
The seed we sow will faithfully keep
Till the full harvest shall grow.

So, cheerily, boys, we'll cheerily sing,
Though we miss in our merry round
Voices that once with gleeful ring
Made the whole valley resound.
Merrily on we'll go,
Yet them in our memory keep:
Labor is light where love is deep,—
For them we'll scatter, for them we'll reap,
And theirs shall the harvest grow!

For loudly they shout as they march, to-day,
Over the battle plain,
Dauntless, untiring, amid the fray,
The patriot's proud refrain.
So steadily on we'll go,
Plowing to sow and reap;
Labor is light where love is deep,—
God hath us all in His holy keep,
And this will the harvest show.

So, cheerily, brothers, cheerily sing,
For here shall they stand again,
When the golden autumn fair peace shall bring,
Uplifting a joyous strain.
And hopefully on we'll go,
Plowing, to sow and reap;
Labor is light where love is deep,
God hath us all in His holy keep,
And this will the harvest show.

ANNE G. HALE.

For the New England Farmer.

AGRICULTURAL ACCOUNTS.

MR. EDITOR:—Almost every farmer is now ready to acknowledge the importance of keeping accurate accounts of his transactions, though it is an admitted fact that they do not practice it to that extent which its consequence demands. We never saw a successful merchant who did not conduct his business in a systematic manner, and this is the secret of his success. Without the knowledge which may be thus obtained, it is impossible to determine the cost of raising a certain crop, or whether it is remunerative or not. One farmer will tell you that it costs so much to raise a particular crop, while another estimates the cost at nearly double that amount. Now this is not much better than guess-work, and neither of them knows whereof he affirms, for the simple reason that they both neglect to avail themselves of the only means of coming at the facts, namely, by keeping full and correct accounts.

But my object in writing is more particularly to call your attention to the farm accounts which are published in the Agricultural Reports, a notice of which I hope will suggest some improvements in future published accounts, or bring out such explanation as will make the subject better understood.

In Mr. Secretary Flint's excellent annual, Agriculture of Massachusetts for 1860, I find the following in a statement of a gentleman, of Hampden Co., who asks a premium for his farm management. He credits his farm with—

26 tons of hay	$364,00
Pasturage for 7 cows, 24 weeks	84,00
Corn fodder	14,00
Swede and flat turnips	91,00
Amounting to	$553,00

He also credits his farm with—

1200 pounds butter	$300,00
Milk sold	50,00
Milk used in family	58,00
Skimmed milk sold	100,00
Amounting to	$508,00
	553,00
To which add hay, pasturage, &c., make	$1061,00

Now, that is a very pretty item in farm profits, but it seems to me but fair to presume that the dairy product was not effected without the consumption of a portion of the crops of the farm, the amount of which should be deducted from the whole; if not, it is a success in scientific and practical agriculture that will revolutionize the whole system, and render it one of the most successful callings.

The farm is credited with pork and poultry to the amount of $180, but no charge is made for their keep, which assists very much in making up a good account, and is a great encouragement to amateurs. And $150 worth of wood is credited as among the crops. Was not the value of the land depreciated by this operation? Thirty-five cords of manure are used upon the place this year, and only one-half of it was charged to the crops, as it was presumed that the remainder went to improve the land. But no account was made of the exhaustion of the land where the hay crop was taken from it, and nothing returned to the soil. $18 are charged as interest on the value of

the stock, but nothing is said of the depreciation in the value of horses used upon the farm. Now, as it is necessary that farm horses should be removed once in ten or twelve years, it would seem, that the depreciation in their value would be an item worthy of note in a well kept farm account.

Other statements to agricultural societies might be noticed, but I will not detain you with any more details of that kind at present. And permit me to say, that this is not written in a spirit of fault-finding, but with a desire that these reports may be improved, so that they may be more useful to brother farmers; and valuable as works of reference. MERRIMACK.

West Newbury, March, 1862.

EXTRACTS AND REPLIES.

MIGRATION OF BIRDS.

I think it is a generally received opinion that the birds which are so numerous in the north during summer, go south to spend the winter. There is a gentleman here who is quite observing about the habits of birds, who says that those which are here in summer remain here through the winter. That the robin goes into caves in the mountains, and there remains in a dormant state till spring, and that the swallow goes into mud or water. He says that in the spring, a few years ago, he saw a large number of swallows come up out of the water in a pond in the north part of this State. S.

St. Johnsbury Centre, Vt., May 19, 1862.

REMARKS.—It is clearly settled that most of our summer birds leave us in late summer or early autumn, for warmer latitudes, robins included. Occasionally, a robin may be seen in New England in the winter. Why they remain, we cannot tell. Perhaps, because they are of a late brood, and do not possess sufficient power of wing to join their companions when they move south. Those that remain may be seen of a still, sunny day in the winter, near some thicket of pines or cedars, and perhaps feeding on the berries of the latter. We do not think the robin ever hibernates like the woodchuck or bear.

It is an old belief that swallows go into the mud in the bottom of shallow ponds and brooks and pass the winter in a torpid state, but the more enlightened opinion is that they migrate, most of them leaving New England between the last of July and the last of August.

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PURE POULTRY.

The question of Mr. Shattuck is one on which I would like information. I have heard it stated, that, by getting a cock kept out two years, and then fetch him home, so that he will not run with his offspring, you can keep pure-blooded fowls. I always intend to change cocks once a year, if I can without getting one inferior to my own.

I would like to know how many years of breeding in-and-in it would take to spoil the stock, if the best specimens are kept?

The trouble with many farmers is, they will sell their earliest and best lambs, turkeys, chickens, &c., because they fetch a good price. I have often heard them say, "these late ones will do to keep over." Often they do not come to maturity sufficiently to stand the cold weather, and, in this way, they will soon run out. Perhaps this is the case with your neighbor's turkeys. I never knew until this spring, that hens would run out so as to be good for nothing. I purchased four of the old-fashioned kind of hens in March; one of them has laid three eggs about the size of robin's eggs, and wanted to set. The others have not laid an egg, to my knowledge; although one visits the nest frequently, and comes off cackling, I never have been able to find an egg.

SWEET GERMAN TURNIP SEED.

Can you inform me where I can procure Sweet German Turnip seed? There is none to be found in Worcester, and I have lost, the address of Mr. Coy, and do not know that he keeps seed for sale now. Information would oblige a number of your readers.

N. B. The reply to "Subscriber," in the *Farmer* of April 26, signed "C. K. Hubbard, New Worcester," should read C. K. Hubbard, Worcester. H. T. GATES.

New Worcester, May 19, 1862.

REMARKS.—We presume the Sweet German Turnip Seed may be procured at the seed stores in this city.

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SCRAPING TREES.

Will you, or some of your writers, inform me what special benefit to trees is the scraping off the loose bark or moss from trees about twelve years old? If of any benefit, at what time of the year should it be done? A SUBSCRIBER.

REMARKS.—While we were engaged in repairing damages to young apple trees, on Saturday last, occasioned by mice or moles, we had the assistance of a practical orchardist, whose views of the management of trees we considered especially sound. Among other questions put to him was this,—What advantage is gained to the tree by scraping it?

The reply was,—"Not any, to my knowledge. Some persons say that insects find a harbor under the bark and moss, but I do not believe they hurt the tree in the least. It seems to me that this rough bark is provided by nature for the protection of the tree."

His attention was then called to the appearance of the south side of two or three hundred trees, and it was found that on that side, almost uniformly, the bark was very rough, rising in scales from where the limbs start out, to the ground—while on the other sides of the trees the bark was comparatively smooth. We cannot see how the tree is to receive any benefit by the removal of this bark.

Moss on the branches is usually an indication of a slow or stunted growth. Washing this off with strong soap suds—cultivating about the tree, and encouraging it by the application of manure, will be very useful.

THE ENDICOTT PEAR TREE.

I am always happy when my old friend, the *Farmer*, comes to hand. I believe I have read it every week since it was first published by Fessenden—notwithstanding its variation in form. There is something about it that commends it to the New England farmer. There are other papers that I like just as well—particularly the *Country Gentleman*, published at Albany—always sensible and sound; but not quite so well adapted to my instruction. I like the reading on the inside of your paper: it usually gives "multum in parvo," and saves the drudgery of wading through many pages of trash, for it must be admitted that much which is written for the papers is of this character.

The temperature of my office—78° at this moment—and the temperature of the last night, about the same, give assurance that vegetable growth is near at hand. I have never witnessed a more lovely sight than is spread on the fruit trees in our gardens and orchards. I yesterday took occasion to pass by the Endicott pear tree, now more than 232 years old, (the oldest fruit-bearing tree in the United States,) and although like an old man crippled under the weight of accumulated years, it was still healthy and vigorous with blossoms. This variety of pear is known as the "Bon Chretien," which speaks well for those who planted it—notwithstanding they had many prejudices. For those who look for perfect characters or perfect trees, I fear are doomed to disappointment. P.

May 17, 1862.

OYSTER SHELL LIME.

Please tell in your June number of the *Farmer* where the oyster shell lime may be found.

Shall we use it on vines and bushes, such as grape, strawberry, gooseberry, &c.? And if so, how and when? SUBSCRIBER.

Saco, Me., 1862.

KILL THE MILLERS.

The following, from a farmer in New Jersey, may be of interest to many. He says: "Some ten years ago, I purchased the property where I now live. The former owner, being quite a man for fruit, had set a large variety of trees. The farm was noted for producing more fruit, and greater variety, probably, than any other farm in the neighborhood. At the time of my purchase, the trees were on the decline. The cherry and plum trees were covered with black knots, and the fruit was wormy and worthless, so that I was about to cut them down and supply their places with shade trees; but disliking to part with the fruit, and observing that the enemies were at one stage of the existence in the form of a miller, my plan was to destroy them while in that stage. With that object in view, and observing that they were fond of a light, in the early part of the summer of 1855, I commenced their destruction. To do this, I elevated a brisk blaze about five feet from the ground, in the vicinity of my trees. The first evening, between eight and eleven o'clock, the millers destroyed might have been counted by hundreds, which gradually diminished, so that, at the end of one week, there were none to destroy. I then discontinued my fire until the latter part of summer, when I discovered another crop of millers, and again built them a blaze. I have followed the same course whenever the candles have drawn them, to give them a light of their own, which has been twice in the summer. Now for the result: my trees have gradually resumed their former rich green; those knots have fallen from the cherry and plum trees; and this year the crop of Morella cherries has been probably as large as they ever were, and that on trees that were considered worthless five years since, and the fruit, both cherries and plums, not wormy."—*Essex County Mercury.*

HAVERHILL FARMERS' CLUB.

The enterprising farmers, and others, of the town of Haverhill, formed a farmers' club during the past winter, and seem to have entered at once into a most systematic and vigorous prosecution of the labors and duties which they have assigned to themselves. We have before us a list of the subjects they have selected for discussion during the ensuing season. They are as follows: Fruits; Drainage; Farm Implements; Management of Farm Stock; Manures,—comparative value, preparation and application; Comparative Value of Horses and Oxen for Farm Work; Sheep,—breeds, management, &c.; Small Fruits,—kinds and culture; Transplanting Trees and Vines; Apples,—kinds and culture; Is Farming Profitable? Pears,—kinds and culture; Farm Stock,—comparative value of breeds; Seeds,—how to raise, preserve and select; Milch Cows; Grapes,—kinds and culture; Influence of the Atmosphere on Soil and Crops; Experiments that we have made; Poultry,—breeds and management; Farm Buildings,—their arrangement and construction; Adaptation of Soil and Crops; Rural Embellishments; Garden Vegetables,—kind and culture; Diseases of Trees and Vegetables; Farm Economy; Flowers and Ornamental Trees; Noxious Insects; and Are Birds more Serviceable than Injurious to Farmers?

The gentlemen composing this club must possess an unusual amount of zeal, if they attend and keep up the spirit of their meetings during the summer months. We hope they will. In addition to these meetings, there is another feature of their organization which is new, and must be valuable. This is in setting apart a time to meet occasionally, at the farm of any member of the club, with especial reference to an examination, *on the field*, of the subject assigned for the occasion. These meetings are called FIELD DAYS. Thus, on the fifth of May, the subject is the *Preparation of the Soil*, and on the seventh of July, the subject for examination will be *Grasses*. In addition to these, on the eighteenth of September, they are to have a MARKET DAY and FAIR.

If these plans are sustained, the Farmers' Club of Haverhill will afford an example worthy of all

imitation. Some of its members, we know, are not persons to engage in a good cause, and abandon it, short of obstacles that cannot be easily removed.

HOW MUCH MONEY WILL IT PRODUCE?

We make the following extract from an address upon the Agricultural prospects of New England, delivered by the Hon. DANIEL NEEDHAM, at Stanstead, C. E., on the 22d ult.:

"When the young man leaves his New England home, and with wife and children emigrates to the far West, what influences move him? Is it not the bold statement that the virgin soil of that distant land readily produces fifty bushels of corn and forty bushels of wheat to the acre? Is it not for this prospect, that he leaves all his old associations, the land of his birth, the land of abundant schools and churches, the land of good roads and great comforts, to suffer privations in a new country, where school-houses, churches and roads are to be built? The question he should put to himself is, will I better my condition by emigrating? *If the land is more productive of corn and wheat in Illinois, Wisconsin and other Western States, is it more productive of money?* Admitting fifty bushels of corn can be raised to the acre, do we not raise that quantity on many farms in New England? According to the census of 1850, fifty bushels was the average of the State of Connecticut. But if you raise fifty bushels, how much money will it bring? At this very moment, within sixty miles of Chicago, corn can be bought for twelve cents a bushel. Fifty bushels at twelve cents a bushel, will give you six dollars; *and in order to produce this paltry sum of money, you must plow, harrow, hoe, harvest, shell and market an acre of corn.* What will your acre bring you in Vermont? Corn is now seventy cents a bushel; —and if you raise fifty bushels, as you should if you are a good farmer, your acre will produce you *thirty-five dollars.*

How is it with wheat? Wheat is now worth within sixty miles of Chicago, sixty cents a bushel. The average crop of Illinois is less than twenty bushels; and for your acre you will realize less than twelve dollars. In Vermont, our average crop is seventeen bushels, which to-day is worth one dollar and twenty cents a bushel, yielding for the acre, twenty dollars and forty cents.

But suppose you convert your corn into pork, will that help the matter? Pork has been selling this entire winter, within sixty miles of Chicago, at two cents a pound.

The man who leaves Vermont and goes West to get rich by agricultural industry, makes a sad mistake. Northern men have gone West and secured wealth, but it has been by fortunate investments in real estate. Such men can be found in every school district of our State, men who by fortunate speculations have amassed wealth. But the time is far in the future, when men, by legitimate agricultural industry in the West, will reach the coveted goal of wealth."

Keep no more stock than you can keep in good order, and that of the best kind.

PERFUMES.

The chief places for the growth of the sweet perfume-producing flowers are Montpellier, Grasse, Nismes, Savoy, Cannes and Nice. Nice alone produces a harvest of a hundred thousand pounds of orange blossoms, and Cannes, as much again, and of a finer odor. Five hundred pounds of orange blossoms yield about two pounds of pure Neroly oil. At Cannes the acacia thrives particularly well, and produces yearly about nine thousand pounds of blossoms. One great perfumery distillery at Cannes uses yearly about one hundred and forty thousand pounds of orange blossoms, twenty thousand pounds of acacia flowers, a hundred and forty thousand pounds of rose leaves, thirty-two thousand pounds of jessamine blossoms, twenty thousand pounds of tuberoses, together with a great many other sweet herbs. The extraction of ethereal oils, the small quantities of which are mixed in the flowers with such large quantities of other vegetable juices that it requires about six hundred pounds of rose leaves to win one ounce of otto of roses, of course, demands a very careful treatment.

Nice and Cannes are the paradise of violets, producing annually something like thirteen thousand pounds of blossoms. The variety cultivated is generally the double or Parma violet, which is so productive that the flowers are sold at about five pence per pound; and we all know what sort of bouquet a pound of violets would make.

The abundance in Sicily of every flower which in our climate is most highly prized, recalls the traveller in the story, who arrived in a country where the children played at pitch-and-toss and marbles with diamonds, rubies, emeralds, and other precious gems: "These are, doubtless, the sons of some powerful king," he said, and bowed respectfully before them. The children, laughing, made him soon perceive that they were the street-boys, and that the gems were only the pebbles of that country. In Sicily the crimson grenade and rose trees, the peach-colored rhododendrons, and the delicate white camellias, form the country hedges. The white and green myrtles, and pink, white, and flame-shaped and flame-colored tulips, grow wild. When a pleasure-garden is made, the orange and lemon trees are taken out because they are too common. By the same rule, very few people trouble themselves with flowers—they are too vulgar. Alphonse Karr was much surprised to notice that the ladies of Nice never decorated themselves with real flowers, but seemed to dislike them. He observes this is all the more strange in a country where it is no longer a mythological flattery to say that flowers spring from under the ladies' feet. The roses, violets, jessamine and mignonette are cultivated only by the peasants for perfumery purposes, and honored but as we honor potatoes or cabbages.

We are now wholly dependent for our finest perfumes on France, so that when the crop of a flower fails, as did that of the jessamine last year, it will put the manufacturers to serious inconvenience. It would, therefore, be the interest of perfumers to promote the production of those flowers in other countries; and the high price they fetch in the market would make it a very profitable speculation. It has been proposed to cultivate flowers in England on a large scale, for perfumery purposes, but the climate renders this scheme to-

tally impracticable. For English flowers, however beautiful in form or color, do not possess the intensity of odor required for extraction; and the greater part of those used in the south of France for perfumery, would grow here only in hot-houses. The one flower which might be had in abundance would be the rose; but the smell of it is very faint compared with that of the southern rose. Add to this the shortness of the flowering season, and the high price of land and labor, and it may be safely said that the cultivation in England of flowers for perfumery would prove as bad a speculation as attempting to make wine from English grapes.

The most widely-known of the toilet-waters having an alcoholic basis is the eau-de-Cologne, invented in the last century by an apothecary in Cologne. In can, however, be made just as well anywhere else, as all the materials come from the south of France and Italy. Its perfume consists principally of the flowers, leaves and rind of the fruit of the bitter orange-tree.—*All the Year Round.*

For the New England Farmer.

SMITH'S PATENT FENCE.

Mr. Editor:—The *Farmer* for May, 1862, contains a communication from some one in South Amherst, in relation to my fences, in which he expresses the opinion that the patent can be evaded by omitting the preparation of the posts.

Even if this could be done, it would not be for the interest of any farmer to do it, as unquestionably the fence will last three times as long with the ventilated posts, as it would without them. But it is certain that no one can lawfully build the fence by dodging that claim. I have the written opinion of the ablest Patent Solicitors in the country, that the claims of my patent will give me all the protection I shall need.

Without wishing in any way to include my humble self among them, I will say that scarcely any class of persons have done more to advance the material interests of our people, and to give our country a name and fame among the nations of the earth, than American Inventors. And yet, there is scarcely one who is the author of any very important improvement, but whose rights have been questioned, and in many cases with about as much of justice as the rights to the tempting cargo of any vessel are liable to be questioned by every pirate rover of the seas.

If the gentleman is really "a farmer," and will send me his name, I will give him the right to build the fence, to keep him out of the way of temptation.

INJURY TO FRUIT TREES FROM MICE.

For several years I have used shingles tied around the trees, and when well done, have never had a tree injured. The mice live in the ground, and I think always begin their depredations close to the ground, and work up, and the shingles will prevent them from doing so. Strong twine will last about two years; small wire, put on loosely, several years. A wash of cattle manure and clay, made thin with water, and applied to the bodies of the trees with an old broom, will prevent sheep and calves from gnawing the bark for several weeks.

Charles R. Smith.

Haverhill, N. H., 1862.

PEARS — THE SLIMY SLUG.

One of the worst enemies with which the cultivators of the pear have to contend is the "Slimy Slug"—(*Selandria Cerasi.*) They generally make their appearance in vast numbers, locating upon the upper side of the leaf, and eat it until it presents the appearance of a piece of coarse muslin, nothing but the fibres being left. Consequently they cripple the tree, and destroy the fruit if not immediately checked. In appearance they very much resemble the tadpole, are of a dusky brown color, and from an eighth to half an inch in length. Downing, on page 328 of his "Fruits and Fruit Trees of America," and Kenrick, on the 55th page of his "Orchardist," mention this insect, and both recommend about the same means for its destruction. Whale oil soap, applied with a garden syringe, is perhaps one of the most effectual remedies that can be applied to pear trees infested with this enemy; but a writer in a late paper recommends the following as the most effectual method of destroying them:

"Take a piece of very coarse cotton cloth, say about twenty inches square, and tie up the corners of it, enclosing one or two quarts of air-slacked lime or unleached ashes. Make this fast to one end of a long, light pole, and in the morning, while the dew is on, elevate the sack of lime above the topmost branches of the tree, striking the lower end of the pole with a small mallet occasionally, and moving the pole or sack about till every leaf is finely dusted over with the lime or ashes. This operation need not be repeated if once thoroughly performed. The time requisite for a full-grown pear tree is not over five minutes."

It is an excellent plan to scrape the bark of pear as well as apple trees early in the spring, and wash them thoroughly after scraping with a mixture of soft soap, ashes and green cow-manure. The wash, however, should not be so thick as to form a coat on the surface, as all obstructions of the pores should be by all means avoided. Like the human skin, the bark of trees has a very important function to perform, and any interruption of its natural offices will inevitably prove an injury to the tree. If you can procure it, a few quarts of the rubbish from the blacksmith's floor, consisting of fine cinders and iron scales, will be of great benefit to your pear trees. The soil should be opened, and the rubbish scattered evenly aronnd the trunk, and in contact with it. Lime is also beneficial.—*Cor. Germantown Telegraph.*

Hay Spreader and Turner.—Mr. Moses Mandell recently showed us a model of E. W. Bullard's Patent *Hay Spreader and Turner*, and from examination given it, we came to the conclusion that it is a machine of practical utility. It is simple in construction, portable, and may be managed without difficulty by any person capable of using a common horse rake. Several farmers of the fine farming town of New Braintree, certify that it will perform the work of ten men, and at the same time do the work better than it is done by hand. We have no doubt that it is an excellent machine

THE SEASON AND PROSPECTS.

The large quantity of snow that "lingered in the lap of spring," melted gradually away and kept the ground saturated as long as it lasted. Since this supply has ceased, there have been but few spring showers, so that we began to feel the effects of an early drought. By the twentieth of May, the young clover began to droop in dry places, and the dust in the streets and on high land fields, when harrowing, seemed to be as thick and active as in midsummer.

The drought—we are informed by a gentleman just from New Hampshire and Vermont—has pinched more sharply there even than in Massachusetts. He also states that farmers were planting in their fields, while huge snowbanks were piled on the hillsides, or in the valleys, within sight! Such a scene, we presume, is not often witnessed.

On the night of Saturday, May twenty-fourth, there was a sharp frost in all the region about Boston, which was quite destructive to the early corn, potatoes, beans, tomatoes, and other tender plants which had been brought forward by extra care to supply a waiting market. The blossoms and young leaves of the forest trees, were also destroyed wherever they came within five or six feet of the ground. On Monday, the 26th, they presented an appearance of having fire run through them.

On Tuesday, the 27th, there was a copious and delightful rain, which fell steadily and slowly through most of the day, reviving the face of nature, and causing the world to look as beautifully as the most active imagination could well conceive. This gladdening of the earth went up, also, to the hearts of men, so that every countenance was radiant, and all for a time forgot the discomforts of a new call "to arms," and rejoiced in the sunshine that broke out anew upon the refreshed land, teeming again with new life.

The promise, now, for good crops of all our agricultural products, is cheering. The blossoming on all our fruit trees has been profuse, and the timely rain has aided the setting of the young fruit, which now appears remarkably well.

Planting has steadily progressed, so that now, Monday, June 2d, it is nearly completed, while some of the early crops have already had a first hoeing. A wide breadth has been occupied with wheat, corn, barley and potatoes, and with careful culture and the blessing of Heaven upon them, our average products will not be decreased in consequence of so many of our farmers being absent in the "tented field."

In England, by the latest reports in our foreign exchanges, the prospects still remain rather gloomy. Heavy rains, and in some districts severe storms have succeeded the early cold and wet weather. English writers are "startled" at the fact, "that accumulated stores in the lake ports will enable shippers to send on *greater* quantities than were last season supplied to Europe." England ought to know us better than she appears to. She is able to purchase maps, and study them, and she has intelligent persons continually travelling among us,— and yet, from reading the London *Times*, one would suppose that its writers had rarely seen a geography, or consulted a map of the United States! Is this ignorance, or a wilful perversion, intended to mislead the readers of that influential journal? The "startling" intelligence in relation to our resources in breadstuffs, is one of the evidences that England does not appreciate us, either in our intelligence, our resources in the grand staples that go directly to sustain life, in our ability almost to speak into existence the military implements necessary to resist or repulse any foe, or to fill the hands of seven or eight millions of freemen who love liberty better than life without its blessings. No people on earth, probably, are so independent of all other people, as those of the free States of this Union. God grant that we may use our great privileges wisely and well, living firmly up to our doctrine, never to aggress upon others, nor to yield the rights which are clearly our own.

For the New England Farmer.

FENCES.

Much has been written about fences. I would recommend a very cheap one, that will require as little ground as any other, made as follows: Prepare good straight stakes five feet long; steep the lower end in blue vitriol liquor, one pound to five gallons water; set the stakes one foot deep in the ground, on a straight line or otherwise, eight inches apart; saw off the tops even, and nail a strip of board two inches wide on top; put one nail in each stake, and the fence is finished. If the frost should lift the stakes, they may be easily driven down.

There are thousands of miles of fence needed on land where it would be impossible to obtain boulders to fasten the posts of Mr. Smith's patent fence to. I don't understand how he is going to tie his braces to the boulders with a wire. I should think his boulders and braces must take up at least one foot of ground on each side which is too much to waste.

Another kind of cheap fence is made horse-rack fashion, with spindles one inch square, three feet long, and eight inches apart, the ends of the rails halved and pinned together, and a pair of stakes set at the end of each length, with a withe on top. Set the fence on a stone or block, eight inches from the ground; this fence is very convenient for removing, if necessary.

Another fence I like very much for a garden or outside fence; place boulders at a proper distance, drill a hole four inches deep; place an iron post seven-eighths or one inch diameter, and fill with melted brimstone; the rails may be two by three

inches square; bore with an augur of a suitable size so that the bottom rail will "stay put," and not split the rail; bore the top rail not quite through, say minus one-half inch; nail on slats from one inch to four inches wide, and from two to four inches apart; paint the top, or saw it square, or put on a cap. JAMES PALMER.

South Hampton, N. H.

For the New England Farmer.

MENTAL CULTURE.

MR. EDITOR:—Your remarks upon this subject, in the calendar for February, were perused with much pleasure, not only by myself, but doubtless by all of your many thousands of readers. While reading these remarks, I felt an irresistible desire to write something in confirmation of the truths therein contained.

It has always seemed to me that the practice of writing down our own individual thoughts upon any given subject—especially if those thoughts are intended for publication—is one of the best, if not *the* best means by which we can become thoroughly acquainted with that subject. For if a person is writing an article for the public to read, he will naturally strive to make correct and reasonable statements, and this desire will cause him not only to search every nook and corner of his own mind and experience for ideas, but everything relating to the theme under consideration, whether found in book, paper, lecture, sermon or conversation, will be eagerly grasped at, and woven in with his own thoughts, in such a manner that it becomes, as it were, a part of his own mind, and makes an indelible impression upon his memory. This digging out and bringing to the light our own ideas upon a particular subject, comparing them with the thoughts of others, and treasuring up the observations and best thoughts of other minds, is an exercise which greatly strengthens and enlarges the mental faculties. And this discipline, either in the form of writing, public speaking, or instructive conversation, is one which every mind *must* go through, or it cannot arrive at even a moderate degree of mental culture.

The minds of some people are like a riddle-sieve; they are always hearing and reading, but the facts, fancies, or whatever they listen to, leak out as fast as they come in. Such persons are, virtually, without any minds; but by the simple process above mentioned, it is within their power to possess this important article.

There is another class whose minds are like a stagnant pool—continually receiving the rains and streams, but having no outlet. The above process would also benefit this class of individuals.

There is another class still, whose minds have no outlet or inlet; who shut out all light and knowledge, especially that which is derived from books, papers, lectures, and similar modes of mental improvement.

These last mentioned individuals are in a more hopeless condition than those who belong to either of the other classes; but a vigorous, and continued pounding upon the hard shell in which their dark thoughts revolve, will finally cause it to yield.

Although it is evident that a large portion of the farmers and mechanics of our land possess great and increasing desires for knowledge and self-improvement, yet the fact is also equally certain that another large portion have no such desires, but, in many cases, a positive aversion to everything like study, or a close and continued application of the mind in one direction.

By reason of their ignorance, these last named persons usually regard the contents of books as of little value, not knowing or considering that the best thoughts and most valuable experience of wise, learned, and gifted minds are treasured up in these storehouses of invaluable knowledge, the destruction of which would cause the world to recede backwards many degrees in the scale of human progress. Of course, I do not mean to say that *all* books are thus valuable, for many, very many, are worse than useless, and the sooner they are burned, the better,—but only those which are strictly moral in tone, and which contain important thoughts and useful information, whether in the form of fiction or actual fact. How many farmers, mechanics, and other laboring men there are, who prefer to spend their evenings and other spare hours at the store, bar-room, or other public places, listening to, if not taking a part, in the idle, coarse and vulgar talk so frequently heard in those places, rather than to remain at home and hold converse with noble and intelligent minds through the medium of books, or write down their thoughts and observations for their own good and the benefit of others.

Although a great many towns and villages have purchased agricultural and miscellaneous libraries, and much good has been done through their agency, yet, in more than one town, I have known some of the most valuable books in those libraries to remain for years, with their leaves uncut! I hope and believe that these are exceptions to the general rule, but if not, it seems to me that the object for which these libraries were procured is not being fully accomplished.

To enable a person to make any perceptible progress in mental culture, one or two hours of each day should be devoted exclusively to that object. But, says some hard-working man, how *can* I find time for this purpose? The evening is the only part of the twenty-four hours that I am not at work, and then the children make such a noise that I cannot call my thoughts together; and oftimes a neighbor drops in and interrupts me; or I am too tired and sleepy to apply my mind to any subject. Such individuals should have a study or room by themselves, and nothing but the most imperative duty should be allowed to disturb them during the hours which they have set apart for self-improvement. This plan may cause an incredulous smile to overspread the countenance of some conservative farmer, and he will probably set me down as a *humbug*, but the plan may be a good one, nevertheless. Men in other professions have their places for retirement and study; why should not the farmer, the mechanic, and all other men, or women, who belong to the laboring class? But, says one, *all* cannot be learned; the working classes must ever remain in comparative ignorance. That there may be some truth in this assertion, I admit, but not so much as most people imagine.

Let us look at the laboring classes in some of the older countries of civilized Europe, and compare the amount of knowledge and mental culti-

vation which they possess, with that of the working men and women of our free States. Is there not a vast difference? And what has made this difference? It is our free schools, free libraries, free speech; our habits of reading, our public lectures, and various other established modes of imparting and receiving instruction in every department of knowledge and literature, which have placed the laboring classes of the *Northern* portion of this country far above, in point of intelligence, the common people of every other land.

The question now arises, Have we, as laboring men and women, yet reached the highest round in the "ladder of learning," which it is possible for us to arrive at? I, for one, think we have not. If the "good time coming," of which the Hutchinson family used to sing, ever comes to bless mankind, it will not be until the minds of the common people arrive at a state of mental culture, intelligence and goodness, greatly surpassing anything which the world has yet witnessed.

South Groton, 1862. S. L. WHITE.

THE EAGLE'S STRATAGEM.

As the mountains around the Konigs Sea abound in chamois, the eagle very naturally resorts there; and opportunity is frequently afforded of witnessing his tactics, modified by circumstances. The following account gives an instance of most cunning stratagem; but it also shows how impotent for attack the eagle is when his victim is not entirely exposed. A good sized chamois buck had got upon a ledge of rock, and was gazing downward and about him as these animals like to do. An eagle perceived him; but as the bird could not approach close to the rock on account of his breadth of wing, he resolved to obtain the prize he had marked as his own in another manner. So he sailed by the chamois on his narrow path as near as he dared come; then again and again; and as the animal retreated in order to quit his perilous position, the eagle, wheeling round in a smaller circle, met him instantly, to hem in and cut off his retreat. By thus rushing past within a few feet of him, and filling him with terror, he hoped to bewilder the chamois, and cause him to fall over the precipice, in which case he would have but to descend, and carry off his booty. And in fact, the chamois, from trepidation probably, in turning a corner, slipped with one hind foot over the ledge. He lost his balance, and fell headlong over the rock, as the eagle intended that he should. But after lodging for a short time on an intervening slope, the carcass rolled off, and came toppling down into the lake. The whole proceedings had been watched by two persons in a boat. They now rowed across to get the chamois; while the eagle, disappointed of his victim, wheeled above them, watching all they did.—*Forest Creatures; by Charles Boner.*

HOW TO CATCH SKUNKS.—Every man may catch his own skunks. I have just discovered a new and novel trap for catching these pesky animals. I take an old flour barrel, tack my bait in the bottom, and lay it on two blocks, about six or seven inches high, one of which is near the centre; the skunk goes in, steps over the fulcrum, and the barrel rights up on its end, with the skunk in it. He can readily be disposed of by throwing him into the water, and then shooting him. I have taken five within a few nights. This is safe against cats and other domestic animals. Try it.—*Cor. Ohio Farmer.*

For the New England Farmer.

RETROSPECTIVE NOTES.

"HINTS ON BUYING FARMS."—The article with this heading in the number of the monthly edition of this journal for May, and in the weekly of March 29th, is so complete in its enumeration of the several most desirable qualities in a farm, and so judicious in all the directions and remarks which it contains, that to any one—especially any young man—about to purchase a farm, its value would be *very great* indeed. Let any young man about to select a farm, which he intends to make his home for life, "read, mark, learn and inwardly digest" the several hints and items of information in this article, and he would almost certainly escape making some sad blunder or oversight, which might be a source of regret, loss, and annoyance all his life, and for ability or opportunity to correct or nullify which he would willingly pay perhaps hundreds of dollars. The writer of this knows more than one individual to whom these directions would have been worth a good many hundred dollars, as they would have saved said individuals from oversights or neglects of important points in purchasing a farm, which have been a source of regret and much inconvenience and disadvantage ever since their selection and purchase were made. Probably, a good many of the readers of this journal know of similar cases among their neighbors, or may even be so unfortunate as to be conscious that they themselves have made blunders in the selection of their farms, such as they might have avoided if they had only had the benefit of such hints as are furnished in this article. A copy of these "Hints on Buying Farms" would have been cheap to a great many, at the time of purchasing their farms, if they could have been had at any price from fifty to five hundred dollars. If the oversights and neglects, or downright blunders, made for the want of just such hints and just such information as are furnished in this article, could *now* be atoned for or nullified by the payment of any sum within the range just named, there would be not a few who would be ready, at such a price or even a higher one, to redeem their errors in the past.

Might it not, therefore, be an undertaking of great benefit to young farmers—though, perhaps, of no great profit to the author or the publisher—if these "Hints," somewhat enlarged, perhaps, were put into a convenient form, such as a vest pocket manual, or a tract, and put in some way within the reach of all who may soon have to encounter that difficult, and often ill-executed operation, the selection and purchase of a farm? Every farmer in New England, as well as in other regions of country, might subscribe for a dozen or a score of copies of such a tract or little manual, and, by distributing them among his sons, hired men, and others, be doing a large amount of good at a very small cost. But until this article shall have been printed separately, those disposed to confer such a favor on any decent and deserving hired man, or other young person, must give it to them, or refer

them to it, as we now have it, in the fourteenth volume of the *New England Farmer*. This single article is worth more than the price of a whole volume, and may be, and will be, we trust, to some young men, worth more than the price of all the volumes of this journal which may be published during their life-time.

CONCENTRATED MANURES—WILL THEY PAY? The communication with the above heading, from the pen of THOMAS ELLIS, of *Rochester, Mass.*, is worthy of consideration by *practical* farmers, especially in these days when *puffing* is so extensively practiced, and certificates seem to be so readily obtainable, on two accounts at least. This communication may be found in the weekly edition of March 29th, and in the monthly for May; and is noteworthy, as we have said, on two accounts: First, for its candid and discriminating estimate of the real purport and value of the mass of certificates and reports of experiments with concentrated manures, in regard to which Mr. E. testifies that among all that have fallen under his observation, he has as yet seen none which prove the first thing which a practical farmer wants to be assured of, viz., that they will pay. He admits that they all agree that these manures will cause vegetation to start rapidly, and usually to produce more or less increase of crops, but fail to show that the increase in the crops will pay back the money invested in the fertilizer used. So far as *ordinary farm crops* are concerned, excluding from present consideration garden produce and farm crops of an extraordinary kind, or in extraordinary circumstances, there is just such a want of proof that investments in manufactured fertilizers will pay, as is asserted by Mr. Ellis. Prudent and practical men, therefore, and all who farm for a living or for profit, ought to feel under obligation to Mr. Ellis for opening their eyes so that they may see more clearly the rather ambiguous, (if not sometimes, also, the deceptive,) and entirely unsatisfactory character of the most of the certificates and reports of experiments which are put forth so abundantly by those interested in the sale of manufactured manures. The just inference from the observations of Mr. E. is this—that it is the dictate of prudence not to spend money for manufactured manures until there is more satisfactory proof that they "will pay."

The second of the reasons referred to as making this article by Mr. E. worthy of attention, is, that it furnishes one instance and proof of the not unfrequent unprofitableness of applying manufactured manures to ordinary farm crops. The increase of corn thus obtained by Mr. E. cost him, in one case $7 per bushel, and in another 84 cents. There is need, then, of caution and prudence, at least. MORE ANON.

THE *Progress*, of Lyons, states that an engineer has just discovered a Celtic barque sunk in the mud in the Upper Rhone, which is supposed to have remained there, in a bed of sand and gravel, for several centuries. The barque is a single piece of timber, hollowed out like an Indian canoe. It measures 27 feet in length and 8 in breadth. The wood of which it is composed is completely petrified. This curious vestige of the navigation of the Allobroges is to be placed in the Museum of Lyons, where it will be conveyed on one of the rafts which descend the Rhone.

For the New England Farmer.

SPREADING MILK---CRIBBING.

MR. EDITOR:—I have a very valuable heifer whose milk spreads so bad that I can hardly hit the pail. Will some one tell me a remedy for it? Crops in this part of the State are looking well. Grass, for the time of year and lateness of the season, looks finely. Apple trees, big and little, all sorts and kinds, are in full blossom, and if we have nothing to blight them, we shall have such a crop as will be long remembered.

I have been much pleased with the receipts that have been given in the *Farmer;* some of them are worth the price of subscription alone, but I think I could suggest an improvement to those who give the receipt, to give the manner of making and applying the remedy. The remedy may be an effective one, yet still of no use, because we do not know how to make and apply it. Among all the receipts given I think I have never seen one for

CRIBBING.

This disease originates from a sour stomach. First caused by a habit of biting the crib whilst eating, and in so doing, the horse swallows wind, which causes the stomach to become sour. Overeating and drinking would aid in this disease. A horse with this disease is the same as a person who, after eating, belches up wind from the stomach, and will, in time become a dyspeptic.

Cure.—Take one tablespoonful of pulverized charcoal, one teaspoonful of sal soda, mix in a gill of corn meal, and give three times a week until a cure is effected, which will depend on the length of time the horse has been addicted to the habit. The horse should be fastened in the middle of the barn floor by a rope from the beam overhead, so that he cannot get hold of anything to bite, and feed him from a basket fastened on the head. It is said by those who have tried it to be a sure cure.

New Hampshire, 1862. M.

REMARKS.—One leading cause of the habit of "cribbing," is in the irregularity of feeding, and in not satisfying the appetite of the animal. If a horse is fed liberally and regularly, we doubt whether he will ever contract the unpleasant habit of "cribbing." Is it not the neglect of this regularity and supply that occasions the "sour stomach?"

EFFECTS OF LIME WATER.—It is well known that the water of several of the Middle and Southern States is largely impregnated with lime, the effect of which is to impair the normal action of the alimentary canal. Already our troops have begun to suffer from drinking it, as we learn from various sources. A gentleman of this city, who has travelled extensively in the lime-water region, informs us that he made constant use of vinegar with success as an antidote to its effects. He used about a teaspoonful of vinegar to a common sized tumbler of water. It is his opinion that any other kind of acid will have the same beneficial effect which he realized from the use of vinegar. We hope our soldiers will practice upon this suggestion.—*Fall River News.*

For the New England Farmer.

ARE BAROMETERS WEATHER-WISE?

MR. EDITOR:—Barometers are not omniscient, as your Vermont correspondent, A. G. Dewey, justly intimates. All they can do is, to weigh the atmosphere over the place where they are hung. This indicates something, but not everything. A sudden fall of the mercurial column shows a sudden diminution of the atmospheric column over it, and this implies that there will soon be a rushing in of the heavier air around. This may prove to be only a squall of wind, or it may be accompanied by a thunder storm. If the barometer sinks slowly, day by day, a rain storm may be expected, if it falls considerably; but after a slight descent it may alter its course and go up again, and no rain will fall. Easterly, drizzly rains on the seacoast are not indicated by the barometer, for they come merely from the condensed, moist air from the ocean, and there is no change in the atmospheric pressure necessarily preceding this drift current.

There are other things to be considered in our endeavors to foretell the weather, and I would advise your correspondent, and all farmers, to read Daniels' Meteorology, so as to fully understand the subject. After observing the barometer, a record of it being regularly kept, let him also ascertain the dew point, or the temperature at which the atmosphere deposits its aqueous vapor. This may be very readily effected, by taking a silver or a tin cup, and after first ascertaining the temperature of the air in the shade, let him put some water into the cup, with a piece of ice, and stir it until moisture begins to deposit on the outside of the cup, when the thermometer, placed in the water, will give the temperature. This is the deposition point. Now throw out the ice, and wipe part of the cup dry, and wait until after the deposition of a slight film of moisture, it again disappears. This is the vaporization point. The mean between the deposition point and the vaporization point is the true dew point. Compare this with the temperature of the air, and note the difference. Suppose it to be fifteen degrees. Then the air must be cooled to that extent to cause it to deposit moisture, or to rain. If the difference between the dew point and the temperature of the air is but a few degrees, there is a high probability that rain will soon fall.

If the observations are made in the morning, since the heat will augment, as the sun approaches meridian, the chances of rain will be diminished, by this increasing warmth, but if afternoon, for opposite reasons, the probability of rain will be much increased. Indeed, if only four or five degrees of difference between the dew point and the temperature of the air exists, it will be almost certain to rain.

The wet and dry bulb thermometers will answer the same purpose, and since the wet bulb gives the temperature of the vaporization point, and the dry bulb gives that of the air, nothing more is required than to observe them and note the difference of temperatures they indicate.

More reliance may be placed on this method than on any observations of a barometer, but still, it is useful to consult both sets of instruments. The thermometers cost so little, that every farmer can afford to own a pair of them, and after a little experience in determining the dew point, and making his deductions, he will surprise his neighbors by his weather wisdom, and also be a gainer by saving many a load of hay.

Where no instruments can be had, by simply observing whether a wetted and wrung out handkerchief dries rapidly or not, some idea may be gained as to whether the atmosphere is saturated with moisture or not. When you have to wait a long time for ink to dry on your paper as you write, you may feel sure that the air is very moist, and but a little cooling is required to cause it to deposit moisture, or to rain. The spider is a weather-wise from instinct, and does not spread his web on the grass, or over his hole when it is about to rain, but is an early prognosticator of fine weather as he lays out his net on the dewy grass of the morning.

Our senses and instincts are not so fine, and we need the aid of instruments, but they will not serve us if we don't understand the philosophy of the matter, and apply our reason to the solution of the problem. We must have good instruments, and know how to use them, or the wisdom of the spider will put us to shame. You will see at once, Mr. Editor, that it is knowing how to use instruments, that renders them available, and the farmer who rails at meteorological instruments reminds me of the Indian, who, having seen white men observe the indications of a compass, bought one to enable him to find his son, who was lost in the woods, and followed the direction indicated by the north point of the needle, in search of him. Not finding that the instrument pointed out where his lost son was, he indignantly dashed it to the ground and destroyed it, calling it a liar, and venting much abuse upon it!

A man who buys a barometer, marked with "fair, change, rain," &c., and consults its markings without taking into consideration its elevation above the sea, and the various causes which operate upon the mercurial column, and takes no note of the temperature, dew point and course of the wind, but condemns the instrument, when he does not know how to use it, reminds us of the Indian above alluded to, and is equally wise. C. T. J.

REMARKS.—The above is from the pen of a close observer, both in nature and science, and from a sincere and earnest friend of the farmer. While it elucidates principles, it contains simple and impressive illustrations, beautifully expressed, in some of the most common things of the farm, which all may observe if they will. We cordially thank him for his appropriate and timely remarks.

MANAGEMENT OF MUCK IN YARDS.—From an article in the *Homestead*, on "The New England Barn-yard," we copy the following:

The true manure-making period of the year, in the open yard, is indicated by, and perhaps begins and ends with the corn-growing season. That is, muck does not *rot* in the yard while the temperature is too low to favor vegetation, and is perhaps ameliorated more by exposure during June, July, and August than through all the balance of the year. The amount of droppings from cattle is usually the greatest during those warm months,

while they are not tied in the stable at all. The farmer who wishes to manufacture his manure of an even quality will give as much of the month of May as possible to the absorbents already in the yard, and will also endeavor to clean and replenish the second time as near the first of September as practicable. By this method he may get two crops of manure yearly.

MOWING MACHINES ON SMALL FARMS.

In one of the Legislative Agricultural meetings which took place at the State House in March last, when the topic under discussion was that of *Farm Implements*, one or more of the speakers stated that they thought mowing machines were profitable on large farms, but on small ones would hardly pay.

We thought, at the time, that this was an erroneous view of the matter, and upon farther reflection, we think so still. The farmer who has a large farm, is presumed to have capital corresponding with his acres, and to devote his whole time to the management of his estate. He is never *single-handed* and *alone*. If sick, or disabled in any way, he has strong backs and stout arms to depend upon, in his hired men, still to carry on the cultivation of the crops, or to secure the harvests. He can even visit the seashore or the mountains, and be absent for several days in succession, without any special detriment to his farming operations. His corn and roots are hoed and kept in a flourishing condition, and his hay, and wheat, and rye crops, carefully secured, so that he finds loaded scaffolds of golden grain, and bursting bays of aromatic hay, all safely housed, to gladden him on his return.

If he has used a mowing machine, all this labor has undoubtedly been greatly facilitated, and the crops have been economically secured. But suppose he has not availed himself of this labor-saving implement—he has had, and always can have, a force, in athletic men, equal to all the demands upon him. If there is any class of our farmers who can dispense with the mowing machine, and not most sensibly feel its absence, it is this that we have described. This class may be independent of the machine if it will, but not without loss.

Such, however, is not the case with the small farmer. *His* whole success is centred in his own judicious management, aided by his own muscular power. The hard jobs, as well as the easy, and all the duties that incessantly come, both late and early, are also his. His sons may be in the army, factory, or behind a counter, all but the youngest, who is only fourteen, and yet has swung the scythe the two previous years.

Perhaps the farmer is considerably past middle life, and although in good health, his cheek is furrowed, and grey hairs sprinkle his temples. It is true that the grasshopper is not a burden to him yet, but he does not feel like cutting his acre before dinner; he stops to whet oftener than he did twenty years ago, and rests longer in the shade of the big apple tree! In fact, his "mowing machine" does not work as it formerly did. There is plenty of will, but less power, and the work progresses slowly, while he looks painfully around to see what he can call in to his aid, to secure the crops which beneficent Heaven has matured for the support of his family.

The *mowing machine* comes to such a man as a real blessing. It enables him to keep up with his younger neighbors; to cut his crops in season and secure them without loss. He is relieved, encouraged, and feels comparatively young again, because he can carry on his farm as rapidly and successfully as he did in his younger and stronger days!

Perhaps the small farmer is in feeble health—not really sick, but unable to take the lead in laborious work—but with the aid of a mowing machine and a good horse-rake, he is more than a match for the best five men in the county. But this is not all. Somehow, he feels better than he did. His appetite is sharp—he has gained flesh—stands up straighter than for many years before, and with these blessings, another has come, more valuable than all, in a *cheerful, trusting, hopeful* spirit, which brings a new sunshine and joy to his whole homestead! Wonderful! And the doctor says, "All this has come because you do not work so hard!"

There are other reasons why the small farmer should use a mowing machine, but we have pursued the subject too far to give them now. We have said enough to suggest many more reasons to those who are willing to think about it, and so we leave it at present for their own pleasant thoughts and, we trust, judicious conclusions.

QUANTITY OF FOOD FOR OXEN.—Frequent observations have shown that an ox will consume two per cent. of his weight of hay per day to maintain his condition. If put to moderate labor, an increase of this quantity to three per cent. will enable him to perform his work, and still maintain his flesh. If he is to be fatted, he requires about four and a half per cent. of his weight daily in nutritious food.—*Michigan Farmer.*

LARGE sums of money are paid away every year, by the colonial governments in Australia, to boys for the destruction of thistles. These boys, like the rat-catchers, take care not to exterminate their means of living. In order to save this expense, and effectually destroy the thistles, it is proposed to introduce the goldfinch, the brown linnet, the red-poll and the German siskin into Australia, all of which birds live on thistle seed in the season.

RURAL ARCHITECTURE.

DESIGN FOR A COUNTRY OR VILLAGE HOUSE, BY GEO. E. HARNEY, LYNN, MASS.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

In this design we have endeavored to provide accommodation for a small family of cultivated taste, either in the country or village. The provision of a dairy would indicate that it was designed for a Farm House, while it possesses some other features which, though not out of keeping with the uses of such a house, seem to adapt it to some prominent situation and make it something of a show house; hence we think it would be especially suitable for a small milk farm, located in the vicinity of some city or large town, to which the owner might carry his milk every morning for a market—a business from which, we are inclined to think, one might reap quite a profit, besides having the satisfaction of feeling oneself a benefactor—for rich, pure milk is a luxury that would be highly appreciated by dwellers in the city, accustomed, as a great portion of them are, to using a liquid that has been brought for miles in the cars, and encountered several processes which do anything but improve its quality.

This plan we think would be well suited to such a business as that, yet by converting the dairy into a store-room we have a convenient plan for a common suburban or country residence.

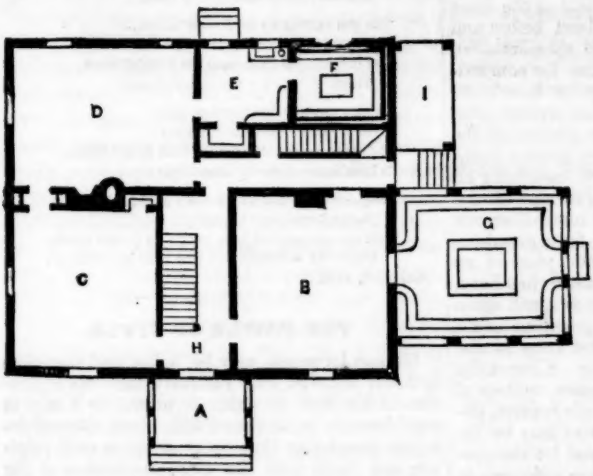
ACCOMMODATION.—From the drive-way in front three easy steps rise to the portico, A, and from this portico we enter the hall, H. This hall measures seven feet by sixteen, and contains the front stairs to the chambers. On the right is the parlor, B, a pleasant room fourteen by sixteen, and opening out of this room on the south-eastern side is a conservatory, G, for plants and flowers. It measures fourteen by eighteen feet, and is fitted up with wide shelves at the sides and a broad stand in the centre for fall plants, with a passage of three feet in width all around it.

This conservatory is designed to be heated in a manner described by Downing as the Polmaise system, namely: by means of a furnace made of a common air-tight stove placed in a brick air-chamber underneath the floor, the heat passing up through a single pipe running from the *top* of the chamber to the floor—while from the floor at the farther end of the conservatory, near the door, another pipe extends downwards, and terminates in the *bottom* of the air-chamber, thus producing a thorough circulation of air all the time, with a regulated supply of fresh air from out of doors conducted by means of a box like a common fur-

nace box, to the chamber. We have seen this method tried, and can recommend it as being the cheapest and most effective way of heating a small green-house like this.

The six upper sashes of the roof have pulleys and cords, by which means they may be lowered and raised at pleasure.

At the farther extremity of the front hall, a glazed door opens into the back entry which extends along back of the parlor and opens out upon an umbrage, I, on the eastern side of the house. This back entry contains stairs to the chambers and cellar, and opens into the parlor and the kitchen. The dining-room, C, is fourteen feet square, and communicates with the kitchen, D, by means of a small passage, fitted up with shelves. On the right of the chimney is a good-sized china closet, with drawers, and shelves for china. The kitchen is twelve by seventeen—is well lighted by three windows, and has a fire-place with an oven and boiler. Opening out of it is a pantry, E, six feet by eight, furnished with hooks, shelves, sink, pump, cupboard, &c., and opening out upon a platform



at the rear of the house. A large closet opens out of the pantry where shown on the plan. The dairy, F, is an important feature. It is on the eastern corner of the house; the umbrage shielding it from the sun on that side, while a window on the north side admits cold air, and other provisions for ventilating keep the air continually fresh. The room is constructed on a principle invented by Mr. HARVEY WING, of Morris, N. Y., and successfully applied to his own house. It is thus described: The room is situated directly over a cold cellar, from which the air may be taken at pleasure by means of ventilators, for the perfect regulation of the temperature of the room. These ventilators consist of simple slits or openings, running nearly the entire length of the room under the shelves, and of about the same width, closed by a board with hinges precisely like a trap door.

Near the ceiling, and opening outwards and upwards on the north side of the house, is a similar trap door three or four feet long and about a foot wide, which an elevating stick with notches cut into it enables an attendant to raise to any desired degree.

When the upper ventilator is opened, the heated air passes out by reason of its specific levity, and the cold air from the cellar rushes in to fill its place, in the same way that water rises in a pump when the air is withdrawn from above. A ventilated space surrounds the room, (here, of about seven inches in width, though in Mr. Wing's it is twelve or more,) and prevents the heating, so often resulting from confined air in the adjacent walls. The shelves are not flat boards, as usually constructed, but are formed of two narrow strips of board set on edge and notched into standards placed about five feet apart, by which means we get a free circulation of air on every side. The strips for shelves are nine inches apart outside, and each strip one by two inches. The shelves are eight inches apart, with six inches of clear space between them for pans. In the room on our plan there are accommodations for about eighty common pans.

The umbrage is six feet wide, and is latticed on the eastern side.

The second floor of the house contains two front chambers, each fourteen feet square; a kitchen chamber, twelve by fourteen; another chamber over the pantry and entry, nine feet square; and a small room over the dairy.

The attics are unfinished. The principal floor is ten feet high, and the second is nine and a half.

The house is designed to be built of wood, and covered in the vertical and battened manner; to be finished with white walls for papering, and a plain wood finish for all the rooms; the kitchen, pantry, dairy and back entry may be grained or stained; the rest of the house may have two coats of paint inside and outside. Cost, about $2500.

MADNESS CAUSED BY HONEY.—In Mesopotamia a peculiar kind of honey is found, which is said, if eaten in any considerable quantity, to make men mad, though only for a short time. The noxious quality of the honey is thought to be derived from the blossoms of the rhododendron, which is abundant there.

For the New England Farmer.

RIVALRY IN FARMING.

Why is it that we see no more competition and rivalry among farmers? The mechanic, manufacturer, and in short those of every profession, are always in a strife to outdo their competitors, while the farmer goes listlessly on, not seeming to care if his neighbor does raise as much again as he does on the same land, or that of better quality. If there chance to be two mechanics in the same village, pursuing the same branch of the trade, they are always on the alert to see who shall do the best work, so as to secure the most custom, which is all right and sensible. Is it not equally sensible for two farmers living side by side, to engage in such laudable competition? If there were half the zeal manifested among farmers that there is in other classes, the products of the soil would be doubled in a short time. Agricultural editors and societies are doing their best to bring out this spirit, but as yet with but little success. The manner in which premiums are offered for field crops is, in my opinion, poorly calculated to bring out much competition in their production. Most of the societies now offer a premium for the largest yield from an acre and half acre of ground, regardless of the expense in producing it. Premiums should be offered on not less than five acres of ground, and for the greatest yield at the least cost, taking the condition of the land before and after the crop is taken off, into consideration. This would give all a better chance for competition, and be productive of far greater benefits to the farming community, than as at present conducted. It would cause a greater portion of the farm to be enriched, and also cause greater quantities of grain to be raised, thereby benefiting all classes, which is the professed aim of agricultural societies. As now conducted, not more than one farmer in one thousand competes for a premium, and those who do, select some little piece of an acre, or less, and put on all the manure they have, and thus raise a great crop, costing as much again as it is worth! But they get a premium, and a great name for raising the largest crop in the County or State, as the case may be. Cannot the managers of our agricultural societies, editors of agricultural journals, or some of their readers, devise some plan by which all farmers may be induced to compete for premiums, and let the premiums be offered in a manner having reference to the permanent fertility of the soil, as well as the production of large crops. If such a scheme can be brought out, we may look for increased competition among the farmers, increased productions, and the original design of the societies will be in part accomplished. Brother farmers, let us hear your sentiments on the subject, and see if we cannot wake up the managers to the necessity of some reform in this matter. H.

Western New York, 1862.

INFLUENCE OF HOT WEATHER UPON NORTHERN AND SOUTHERN SOLDIERS.—In the medical statistics of the army from 1837 to 1854, transmitted to Hon. J. D. Bright, President of the Senate, by Jeff. Davis, Secretary of War, July 28, 1856, on pages 609 and 621, will be found a statement showing the power of endurance of a South Carolina and a New York regiment, respectively. South Carolina 1st, 1,034 men, campaign of 1847, eighteen and a half months' service, loss by disease, 509; New York 2d, 1,063 men, seventeen and a half months' service, loss by disease, 276. From this comparison of a Northern regiment with a Southern one, in a hot country campaign, it appears that the Southern regiment lost by disease very nearly twice as many as the New York regiment in about the same length of time, and the loss from all other causes was one-third less to the Northern than to the Southern regiment.

For the New England Farmer.

LOVE AND THE ROSE.

BY EDWARD BRINLEY.

Hidden away in a wild-wood nook,
Where woodbines and blue bells were twining,
A rose, by the side of a murmuring brook,
Was gracefully o'er it inclining.

The brook sang on in its happy play,
But the rose drooped sadly above her;
Unseen she had blushed from day to day,
With no eye but the brook's to love her!

A wanderer came to that wild-wood dell
And the rose looked up with gladness;
But the limpid brook knew 'twas Love too well,
And she rippled along in sadness.

The god sprang up to the rose's look,
Down deep in her lap he hurried;
She turned in disdain from her faithful brook,
Whilst Love in her bosom was buried!

Hidden away in her fragrant folds,
On his rose couch Love reposes;
But short is the spell that the lone flower holds,
Love leaves her—for other roses!

Deep—deep in that wild-wood's nook,
The neglected rose is pining;
Still the murmurs of Love gurgle on in that brook,
Where the woodbine and blue bells are twining!

Oak Hill, 1862.

THE POWER OF STYLE.

Human language may be polite and powerless in itself, uplifted with difficulty into the expression of the high thoughts it utters, or it may in itself become so saturated with warm life and delicious association that every sentence shall palpitate and thrill with the mere fascination of the syllables. The statue is not more surely included in the block of marble than is all conceivable splendor of utterance in Worcester's Unabridged. And as Ruskin says of painting that it is in the perfection and precision of the instantaneous line that the claim to immortality is made, so it is easy to see that a phrase may outweigh a library. Keats heads the catalogue of things real with "sun, moon, and passages of Shakspeare;" and Keats himself has left behind him winged wonders of expression that are not surpassed by Shakspeare, or by any one else who ever dared touch the English tongue. There may be phrases which shall be palaces to dwell in, treasure-houses to explore; a single word may be a window from which one may perceive all the kingdoms of the world and the glory of them. Oftentimes a word shall speak what accumulated volumes have labored in vain to utter; there may be years of crowded passion in a word, and half a life in a sentence.—*T. W. Higginson.*

For the New England Farmer.

LETTER FROM THE HOMESTEAD.

Chester, N. H., June 5, 1862.

MY DEAR MR. BROWN:—Coming in the train from Manchester, this morning, I stepped off at Derry, about six miles from "home," thinking a draft of my native air, another from the iron-bound bucket that hangs in the well, a glimpse of my beautiful trees planted in the days of my youth, and a day with my kindred, who still remain, might be pleasant and good for soul and body. I fancied that it would be very easy to walk across, but difficulties, unforeseen, beset me at every step. You need not pause to moralize over the decay of my strength, or my premature old age, for the obstacles were not in that direction. People in the country do not walk so much as in the city, and the reasons are, that every one in the country has a horse, and that, much of the year, the roads are snowy, or muddy. A walk of six miles about the city, is no great exertion even for young ladies, but in the country, we never thought of getting over so much space on foot. It was difficult to convince the men about the station, that I was really going to walk to Chester, when I requested to have my valise sent over by the stage. Finally, I got off, and called at the Bank, about twenty rods on my proposed journey, where my good friend, the Cashier, insisted on sending me over with his horse. I declined his civility, with the explanation that I really wanted to walk over the road I had so often travelled when a school-boy at the Derry Academy. Once more I set forward, like the pilgrim in the Progress, and had gone about a quarter of a mile, when a stranger gentleman in a handsome chaise overtook me, and evidently esteeming riding far above walking, saluted me with, "Are you going to the village, Sir?" and made room for me, as if it were matter of course that no sane man would walk, when he might as well ride. I really preferred to walk, but as I had just come out of Court, and did not want to argue, or discuss the question, nor yet to decline without a reason, I stepped in and rode nearly a mile, as the easiest way of disposing of the matter. Once more I was on foot, reflecting for the moment upon the difference between the habits of city and country. I might walk a hundred miles about Boston, and nobody offer me a ride, but here every man insists on doing me a kindness.

Give me country life, thought I, where people know, and care for each other. The first man I met after leaving the chaise, was a gentleman whom I had known when I was a boy, though he was not. He greeted me very warmly, and gave me a little specimen of the frankness of rural manners, by remarking, "Your hair begins to show that you are not so young as you once were." This was gospel truth, to be sure, and as he had introduced the subject, and I recognized on his head the same wig which was there thirty years ago, I could not forbear to reply, that I did not see the least change in his hair, since I first knew him! Whereupon, with a hearty laugh, we said good-by.

The country was in its full glory. The sky was just clearing away, after a gentle, steady, summer rain, all night long, and every bird, and leaf, and blade of grass, was thankful. There is a great deal to see in such a morning. There are the birds. I knew every one of them. They have not changed a feather since I first knew them. When I was a boy I skinned and stuffed specimens of all that could be found, and they are now here at the homestead, a hundred of them, as perfect as when first mounted. I suppose birds do not improve much. Those that came out of the ark probably made just as good nests, and wore just as fine feathers, and sang just as good songs, as these about us. Agassiz says, that an examination of the coral reefs of Florida shows that they have been in process of formation *seventy thousand years*, at least, and that there has been, in all that period, absolutely no change in the different species of coral insects. A class of writers like the author of "The Vestiges of Creation," insist that species progress from one into another, so that, bye-and-by, gorillas may become Christian men, just as tadpoles become frogs, or worms become butterflies. These latter, however, are not changes of species, from generation to generation, but only the perfection of the species in its own life.

The thrush and catbird sang this morning the same songs, I have no doubt, that they sang in Paradise, and though you might possibly teach one to whistle Yankee Doodle, her descendants would not inherit the gift. One advantage which observers of nature possess over mere lovers of mankind is, that the world never grows old to them. They have the same stars by night, wheeling in their constellations grandly over the firmament; the same hills, and valleys, and birds, and trees, and flowers by their wayside, all their life long; while they who depend on society, see young faces become old, or new faces take the places of those that have vanished from sight. But we must pass on, for there is a great deal to see in six miles in the country in the first week in June.

A WORD ABOUT LAWNS.

In front of the farm-houses, where there are no fences, and where cattle and horses daily crop the grass, we see thick green turf, really better lawns than any kept under the scythe. Indeed, there is great difficulty in this hot, dry, unequal climate, in keeping a lawn green and close through the hot season. I tried to see what this roadside turf is made of, as I walked along. It seems to be

chiefly red top or white top and white clover. Herdsgrass is short-lived, a biennial properly, and its bulbous root is destroyed by close cropping. Two things are essential to a good lawn,—keeping it close, and frequent rolling; not merely frequent mowing, but preventing the grass ever maturing into stalks. Nature will do *something*, and has a great propensity to perfect her works regularly, first the leaf, then the flower, then the fruit, then death forever, or for the season. Grasses follow this law, and if once allowed to go beyond the leaf, are reluctant to go back to leaf-making again. We see the same thing in fruit trees, which usually make little wood while full of fruit, but which are readily diverted from their tendency to bear fruit, into producing wood and foliage, by taking off their blossoms. By *keeping* the grass short, as is done by constant feeding by animals, the process of leaf-making is constantly repeated, and then constant treading at the same time keeps the soil compact and uniform, which seems to be favorable to a thick, but not to a rank growth.

MENDING ROADS.

This is the season for "working out the taxes" on the roads, and I, of course, stopped and exchanged civilities with my old acquaintances engaged in this pursuit. I have no criticisms to make on what they were doing, but in general, it may be said, there are two or three principles that need to be understood, on this subject. One of these relates to the cure of wet places, whether springy hill-sides or swamps. Those places are miry and soft, not because of surface water, but because of water below. The remedy is by drawing the water out. A single three-inch tile drain, or a stone drain, laid four feet deep along the upper side of the road, if it be across a hill-side, would, in many cases, at the cost of one dollar a rod, do more to harden the path than ten times as much spent in hauling gravel, and in labor. The water should be cut off before it reaches the road, if possible; if not, a drain each side, three or four feet deep, will draw away all the water from the centre, without disturbing the road-bed, while piling sand and gravel on to soft mud only deepens it. It is merely an application to the symptoms, while drainage removes the disease itself.

BALDWIN APPLES.

Chester is one of the best fruit towns in the State, and the Baldwin apple has been a favorite fruit here. There is an impression, as I gather from the papers, and from private sources, that the Baldwin has become more tender or the climate more cruel, so that the two are not now so well adapted to each other as formerly. I found several first rate fruit men at work on the road, and put the question to them, as I have to other intelligent men here, as to whether the Baldwin is less reliable than formerly. I think the fair conclusion is this, that the old orchards of fifty years' growth and more, are dying off by natural decay, and that the old natural trees which were grafted a dozen or twenty years ago, as most all of them were with the Baldwin, are failing through old age and overbearing. Again, about 1855, many young trees were winter-killed in all parts of New England, and the Baldwin, which is doubtless more tender than most varieties, suffered very much, and as it had been long a favorite, and was largely planted, its loss was generally observed.

I think, however, that the young orchards of Baldwins, which escaped that severe winter, and those since planted are here perfectly healthy, and if I were now to plant an orchard in Chester, or the vicinity, on high and hard land, I should, for market purposes, plant one-half of it, at least, with the Baldwin. The granite hills and the clear air of old Chester are wonderfully favorable to the growth of fruit trees; and by the way, I have to-day been reminded that it is not unfavorable to the growth of enterprising and strong-hearted men, which leads me to say

SOMETHING ABOUT THE WAR.

As I rested a moment at the post-office, the Manchester stage arrived, and upon it one of the soldiers of the 2d N. H. Regiment, Joseph Morse, who was taken prisoner at Bull Run, now on his return from North Carolina, where he with hundreds of others was paroled. He had been in the prisons of Richmond and Salisbury about a year. We had but a moment's conversation, as he had not yet seen his family. To the inquiry how he had been treated, he replied, "You can judge something of it, when I tell you that four men were shot in the prison where I was, for looking out at the window." He looked in good condition, although he said he had suffered from various diseases. I met also at the post-office Mr. Brown, of Chester, who has five sons now in the army. I asked him if he had any son at home. He said yes, he had six more at home, and two of them wanted to enlist. Chester has a population of only about thirteen hundred, and has sent fifty soldiers to the war, one of whom was killed at Williamsburgh.

You perceive that my six-mile journey was by no means barren of incident or interest. Indeed, I have hardly begun to tell you about it. The garden seeds which I planted on the 20th of May, are well up. The frost that followed on the Saturday after, did not venture on to the hill, and the tomato plants which I brought from Boston are safe and flourishing, and on the whole, I am having quite too good a time not to share it with you and our readers.

H. F. F.

For the New England Farmer.

FARMERS' HYMN.

BY R. F. FULLER.

When a week of toil is o'er,
Welcome is the day of rest!
In these courts we come, once more,
By devotion to be blest!
Kindle, Lord, our Christian fires;
And draw upward our desires!

With us, when we hence depart,
And our weekly toil renew,
May Thy presence, in the heart,
Still abide in all we do!
And, whate'er our labor be,
We will work as unto Thee!

Farmer's toil may symbolize,
And the spirit lessons teach.
If we labor to be wise
And the sense of symbols reach,
Nature's volume shall impart
Still instruction to the heart!

In the season of the year,
While to sow the seed we haste,
Life has such a seed-time here,
We remember, not to waste:
Still reminded, as we sow,
We will harvest, weal or woe.

When the tender corn we weed,
With the soft earth freshly stirred,
'T will remind us to give heed,
Lest a sin should choke the Word.
While the cherished corn we hoe,
In our hearts the Truth shall grow!

As the stalks rejoicing rise,
In a glad and green increase,
We will watch, with anxious eyes,
For the growth within, of peace—
Has the gentle herb of grace
With the corn kept even pace?

When, in sparkling morning hours,
Dews, like incense, soar again,
And, when soft refreshing showers
Fall, in blessings of the rain,
Father! we will pray Thee, thus
Pour Thy spirit down on us!

When we cure the crop of hay;
And the herb we cut, at morn,
Withers ere the noon, away—
So the life of man is shorn!
Swaths we mow shall moralize,
As the tree falls, so it lies!

When our harvests all are o'er,
And the end of summer comes,
Doubly precious is the store,
Treasured in our harvest homes:
Garners of the soul were filled,
While the busy farm we tilled!

SULPHURIC ACID.

"A. R." asks us if sulphuric acid, when applied by itself, has any value as manure? We answer, Yes; for although its value may be materially increased by availing of its chemical action on other substances, still, used alone, it has high value. It should always be applied, however, in an extremely dilute state, certainly never at a greater strength than one part of acid to 1000 of water. There are very few plants which do not contain sulphuric acid, or its salts, in some form, and when applied to the soil there are few of those bases with which it combines advantageously, which do not exist in the soil to a greater or less extent.

Suiphuric acid when applied dilute to compost heaps, prevents the escape of ammonia without interfering with its solubility; all free alkalies are changed into sulphates, and with the exception of lime, are still left soluble in water; many of the primaries are more acceptable to plants as sulphates than in their simple condition, while a large number of the proximates have increased value being acted on by dilute sulphuric acid.—*Working Farmer.*

ONE CAUSE OF DROUGHTS AND FRESHETS.

It is plain to every observer, that our country is now more subject to droughts than it was twenty or thirty years ago. Within the last five years, we have suffered in this respect seriously. The loss to the farming community, and through it to the whole population, has been many millions of dollars. If they continue for several years more, in frequent succession, there is reason to fear that the "hard times" will pass away very slowly. Is there any natural cause for droughts, or are they sent upon us solely as special visitations of Providence for our national sins? We would not speak lightly of such visitations, but we are inclined to think that our sufferings in this particular may be traced chiefly to our own bad management. The wide destruction of our forests doubtless has something to do with the production of droughts, and of these destructive floods or "freshets" which are becoming alarmingly frequent.

If the country is widely denuded of its trees, the land is more exposed to the burning rays of the sun, and to the winds which cause a very rapid evaporation. Then, too, forest trees are so many pumps to suck up moisture from the depths of the earth, and to diffuse it through their leaves into all the surrounding atmosphere. From thence it falls upon the surface of the ground. Perhaps some of our readers have amused themselves with making estimates of the amount of water evaporated from the leaves of a single tree, and then of a large forest, in a single day. To one who has never thought about it, the subject is one of great interest. All readers of history know that many of the rivers and streams of the Old World, which once were wide and deep, have now shrunk into much smaller dimensions; from what cause, can any one tell, if not that the hills and mountains are now almost entirely bereft of trees? Droughts prevail all over the Eastern continent, with increasing severity; and scientific and observing men everywhere proclaim that this is owing chiefly to the cause of which we now speak.

Valleys and low-lands, and fertile plains, should of course be cleared of trees, and devoted to farms and gardens; but at least the rocky hills and mountains should not be shorn of their leafy honors. Let the trees stand sacred from the desolating ax, all along our heights, to break the fury of storms, and to condense and bring down the useful vapors of the clouds upon our fields, and into our springs and streams. It is high time that the older States of the Union began to move in this matter, either regulating the destruction of our old forests, or encouraging the growth of new. We believe that some wholesome laws touching this

matter, would both secure our posterity a good supply of lumber, and a good degree of exception from droughts.

All that individuals can do in this matter, is to preserve their own forest land in just proportion, and by underdraining, thus deepening the soil and giving it a porous, spongy character, render the land capable of absorbing and retaining as large a quantity as possible of the water that falls upon it, instead of allowing a large portion to flow off, as is now generally the case. Our State Legislatures, might, we think, with great propriety remit the taxes for 20 years on all land devoted to high forest, (not low woods for charcoal and hoop poles,) and tax land which might, but does not carry a good growth of high or low woods, at the rate its value would warrant if properly improved.—FORRESTER, *in American Agriculturist.*

FRUIT HINTS.

I have met with decided success in using tobacco stems as a preventive for the peach borer. Frequent examinations since early last spring have revealed but one borer. I renew the supply of stems as often as I deem advisable, and find no injury to the roots from them. I have also acted on Miss Morrill's hint relative to the application of saltpetre, alum, or salt, as special manures for the peach, and with promising results. I sprinkle them on the soil to within about a foot of the trunk of the tree.

My trees, which were inclined to be sickly and of puny growth, are now in splendid condition, and this season made very strong, healthy growth, and from summer pruning are sending out strong, thick branches, some sweeping nearly to the ground, offering complete protection to the trunk from the scorching sun.

Last season, I used Gisburst's compound for slugs on my pear and cherry trees. This season I have used nothing but whale oil soap, which I find quite as effectual and more beneficial to my trees, as it gives a healthy, bright color to the bark, and keeps the leaves fresh-looking and free from spots. I apply it once a week or fortnight, as they may require, and the expense is but little more than that of common soap, costing here five to six and a quarter cents a pound. Instead of a syringe, I use a "hydropult," which has great forcing power, and its flexible tube renders it far superior to the syringe in application to the under side of foliage.—H. C. VAN TYNE, *in Horticulturist.*

ABOUT PINS.

The manufacture of pins, in this country, was first undertaken soon after the war of 1812; when in consequence of the interruption to commerce, the value of a paper of pins was not less than one dollar, and those were of a very inferior quality to those now only worth six cents a paper. By the old method of manufacture the number of distinct processes was fourteen. Now they are manufactured in Connecticut by a self-acting machine, which completes them by one process and sticks them into the papers also! The only attention the sticking machine requires is to supply it with pins and paper. At the present time the total weight of pins made in the United States, is supposed to be from seven to ten tons a week. What indeed becomes of all the pins! When we reflect that, up to the middle of the XIV. century, English ladies were obliged to make use of clumsy wooden skewers, we can appreciate the abundance and cheapness of these useful little articles. Yet nothing is new under the sun, and pins are found in Egyptian tombs, of much more costly and elaborate make than those now used. Some of these are eight inches long and are furnished with large gold heads. The ladies' "pin-money," in those days, must have been quite an item in the domestic expenses.

EXTRACTS AND REPLIES.

HARD COAL DUST.

Can you inform me what this coal dust is good for? It collects in the flues of our chimneys. Can it be made use of in any way for manure, or will it be of any use to spread as a top-dressing? Hundreds of bushels can be had at very little cost for saving and trucking. I send you a sample just as it comes from the flue and about the chimneys.

AN OLD SUBSCRIBER.

Biddeford, Me., 1862.

REMARKS.—The dust enclosed seems to be colorless and tasteless, but notwithstanding this, it may have a valuable effect upon plants. Apply it as a top-dressing to small patches of grass land, and about plants that are hoed, leaving some of the same kind of plants, ten or fifteen feet distant, without it, and note the effect. We think it cannot be entirely without value.

CLAY FOR DRAIN TILE

There is in this town a clay bed suitable for making the finest quality of bricks. I wish to inquire if it is also suitable for making drain tile; that is, will the same quality of clay make either brick or tile? Can you also tell me where I can obtain machines for the manufacture of tile, and the probable cost? A READER.

Snow's Store, Vt., 1862.

REMARKS.—Clay that is suitable for brick, we are informed, is just what is wanted for making drain tile. We cannot inform you where tile machines are manufactured. Their cost is from one to two hundred dollars.

LICE ON CATTLE.

In answer to the inquiry of "Yeoman," Laconia, N. H., I will say that a safe, sure, simple and economical way of killing lice on cattle is to take the water in which potatoes have been boiled, rub thoroughly the cattle which are afflicted in this way once a week, for two or three weeks, or until the nits are all hatched out, and the stock of lice will be among the things that were. The remedy is so simple that some will not believe until they have tried it. It is, nevertheless, a sure cure, if faithfully and thoroughly applied.

Another remedy is in an ounce of preventive,—good feed, good water, good clean sheds and stables, and lice will not colonize in the vicinity.

Highland Lodge, Vt., May, 1862. H. F.

MUCK AND ASHES.

I see in last week's *Farmer* Mr. JOHN DAY, of Boxford, is made to say that he would rather have a cord of muck, well composted with from four to six bushels of good wood ashes than the same quantity of stable manure.

Now, is this really so, or is it an assertion made at random, without careful and repeated trial, which should characterize our experiments before given and recommended to the public? If Mr. Day has a good foundation for his statement, (and I certainly have no good reason to gainsay it,) one, at least, of the readers of the *Farmer* would like to be assured of it. How composted, and how long must it lay before fit for using?

WM. J. PETTEE.

Salisbury, Ct., June 6, 1862.

REMARKS.—Mr. DAY will please answer for himself. The muck and ashes would certainly have great value, but whether to such an extent as he states can only be determined by careful experiment.

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PRICES OF WOOL.

You have intimated in your paper, and I have seen the same in the *Vermont Chronicle*, that wool is higher than it has been for forty-four years. I have raised wool about forty years, but within a much less time I have sold mine for sixty cents per pound, and some of my neighbors at sixty-seven. Please inform us where we can sell for the same prices now. JULIUS HAZEN.

Hartford, Vt., May 27, 1862.

REMARKS.—Our intimations of the prices of wool are gathered from the market reports and from information forwarded by wool-growers. We wish we could inform friend HAZEN where to get sixty-seven cents per pound for his wool now.

—

COE'S SUPERPHOSPHATE.

Will you inform me what quantity of Coe's superphosphate of lime will be sufficient as a top-dressing, per acre, for grass land that is now in pretty good order? What is the price per hundred? Do you think it a cheap manure?

JAMES S. HAMMOND.

Liverpool, N. S., May, 1862.

REMARKS.—Coe's superphosphate is an excellent fertilizer, we have no doubt, and we think may be profitably used in many cases. From two to five hundred pounds per acre are used on grass land, spread evenly on the surface, at any time. It costs $45 per ton, or a little more than two cents a pound.

—

RAISING TURKEYS.

Will you, or some of your writers, inform me through your valuable paper the best way to raise young turkeys, and what is best to feed them on when young?

G. H. W.

Ripton, Vt., 1862.

Every day has its appropriate duties, attend to them in succession.

For the New England Farmer.

LESSONS FROM MY WINDOW.

My pillowed chair is drawn up by the open window, for May is here, and south winds and bird-songs woo one away from the darkened stillness of the sick-room. The fruit trees are white with flowers, and waves of fragrance are drifting in at the casement. Tulips in grandeur, and pansies in humility, are opening in the garden borders, while the seeds which winter buried, are bursting the moist earth in resurrection. Two golden orioles are picking the boughs of the fir tree, flashing in and out of the dark foliage like sunbeams; and a chorus of music comes from the top of the old elms.

It would not seem so very strange to me if residents of the city should have few thoughts of the one great Creator; where nearly every object which the eye rests upon bears the impress of art; where the smoothly-shaven parks, and the trees which fain would throw their broad arms in freedom, are trimmed into "graceful symmetry," all bear, in legible characters, the edict of man, "thus far shall thou go."

A real, genuine Christian should be, and will be, a Christian everywhere, no matter what his surroundings are. Yet it seems to me that country Christians are very blameworthy, if they have not a deeper experience of the love of God, and consequently a more overflowing love of humanity, than is possible for one who is confined to brick walls and pavements, with only a fragment of blue sky overhead. Why is this world so beautiful? The grass probably would be as acceptable provender to cattle if it were of some dull hue instead of this soft, refreshing green. Trees might bear fruit without their profusion of delicate bloom. The sun might rise and go down, without baptizing the pearly clouds with all-hued glory, and yet guide the planets on, and scatter light and heat. Why is this wondrous beauty, if not to tell us that a loving Father planned it all, a Father who knows how the hearts of His children would grow sick and faint on their earthly journey, if every step did not give evidence of His watchful presence?

We *have* that *Presence*. Then look up, tired hearts, and rejoice. For He who "hath made everything beautiful in his time" is *"Our Father," Our God.*

REMARKS.—And the most beautiful of all, is the loving, gushing heart, that gives expression to genuine Christian sentiments like the above.

THE BEST TIME TO PRUNE.

An old clergyman is quoted as defining this time to be "when your knife is sharp." He was certainly half right, for a smooth, clean cut is very essential to the healing of the wound. But there is very great difference in the healing of wounds on account of the season in which they are made. Pruning done in March and April, especially if large limbs are removed, often injures an orchard for life. The sap oozes from all the pores and runs down the bark, discoloring it and oftentimes destroying it—called scalding. Without other protection, decay begins, and in a few years you have a hollow limb.

We like the month of June for pruning better than all others. If the work is done soon after the new wood begins to form, the wounds made by the removal of small limbs will be nearly covered over the same season they are made. The leaves make such a demand upon the wood for sap that none of it escapes from the wounded pores. It is also a favorable time for thumb-pruning. By watching the growth of the shoots upon young trees they may be brought into symmetrical shape without much use of the knife.—*American Agriculturist.*

THE MILLENNIUM COMING.

By referring to Webster, Noah, not Daniel, we find that the word "millennium" signifies a thousand years, or *a period of happiness!* An impression is upon our mind—probably gained by the early reading of an ancient book—that this period of happiness is to be preceded by great revulsions among men—by wars and rumors of wars—by famine and pestilence, and untold horror and suffering occasioned by the unbridled ambition of wicked men, and the atrocities of their deluded followers.

The latter part of these predictions is now certainly fulfilled to the letter. The war is upon us in gigantic proportions,—a cruel and wicked one, waged by those who had always enjoyed Heaven's choicest blessings,—a causeless, unnecessary war, and intended to destroy the best government that ever blessed mankind. On the heels of this will follow those dire calamities always consequent upon war,—the destruction of public property, the devastation of private homes and scattering of families,—the debasing influence of camp life, the breaking up of the usual channels of business, and the want of that commercial confidence which must exist among business men in order to secure national prosperity. These evils will stalk like spectres through all the southern land, where old men will lie down and die for want of bread, and the wails of starving women and children will fill the air, as with hollow eye and sunken cheek they seek a scanty subsistence from devastated fields and the smouldering ruins of grain stacks set on fire by their infatuated hate.

But we must not lose sight of the *Millennium.* Although thick-gathering horrors rest upon our deluded brethren of the South, plenty and prosperity dwell with us, in all the substantial wants of life. The hum of industry is everywhere heard, our granaries are abundantly supplied, labor is everywhere rewarded, and every heart and hand is full of devotion to the cause of liberty, and the special care of our sons, now in the field.

In the midst of our New England towns there is one that is a MODEL REPUBLIC—a forerunner of the blessed Millennium! During the Indian, French and Revolutionary wars, though with a population not exceeding five hundred souls, it sent *one hundred and four* soldiers into the field! It has now a population of about ten or twelve hundred souls, who have real estate to the amount of a quarter of a million of dollars, and have a million at interest! Their taxes are about forty cents on a hundred dollars. They also own a fine town farm, which, for a long time, had but one inmate, a poor soldier of the war of 1812. The *poorest man* in town kills a good beef and a hog annually for the use of his family, and keeps one or two good cows! There is not a *lawyer* or *doctor* or sheriff in the town! They have never dismissed a minister from the pulpit, and the people have not had a case on the docket of their county Court for more than ten years! It is said that no widow of this town ever had her "thirds" set off, and that wills are almost always settled by the parties interested. There are eleven schools in the town, usually taught by young women, and it has always been the practice to send the boys to college, who are "*quick* to learn."

The soil of this little republic is high, moist and warm, not frosty, and during extreme cold weather, the thermometer does not fall so low, by ten degrees, as in some other towns within ten miles of it. The people are nearly all farmers, and are remarkably healthy. Some of its citizens have lived to be more than one hundred years of age, many over ninety, and the "most of them have lived to be from seventy-seven to eighty-five!" Truly, they have found the "elixir of life." Major S. says he has seen three-fourths of the world, but never found a soil so good, or a people so healthy. No liquor is sold in the town, except as a medicine. An agent was appointed at a salary of $40, and the first year his returns showed sales to the amount of ten dollars! At a central point, stand two splendid liberty poles, throwing the glorious stars and stripes to the breeze. It was on this very spot "where the boys rendezvoused and were inspected, and with their fowling-pieces marched to join Gen. STARK, at Bennington, during the Revolutionary war. They had no music to cheer the parting from the loved ones they were leaving behind, and must have gone in silence and sadness, had not an old gentleman by the name of ROACH—honored be his memory—placed himself in front, and set up such a *whistle* as electrified the whole party, and put new mettle into their heels as well as their hearts!

Many other virtues and graces abound in this delectable town—this little Utopia, where the millennium is dawning. The men, of course, are excellent husbands, and the women exemplary wives. The daughters are from a healthy race, and are fair to behold, vigorous, and not "bad to take," when they can be caught. The young men—except the scholars—stick to the farms, take, and

promptly pay for the newspapers they read, keep posted up in the affairs of the world, and are brave, hardy and intelligent—true descendants of the old stock of '76. Eureka! What a blessed place is DUNBARTON, Merrimack County, in the State of New Hampshire! But Dunbarton cannot supply the demand for girls for all New England, and young men who are "seeking a settlement for life," must govern themselves accordingly.

Whatever of romance may be found in this article, may be charged to our old friend, DAVID TENNY, Esq., of Dunbarton, who thinks that if that spot is not Paradise itself, he who resides there will find himself on the direct road to that desirable place.

For the New England Farmer.

SEASON IN VERMONT---SHEEP AND LAMBS.

MR. EDITOR:—It is now the 27th day of May. The weather is fine. Grass looks well, as does early sowed grain; the season has been short for farmers to get in their crops, yet they have not been idle since Mother Earth has been stript of her white covering which has so long concealed her from view. The farmers have got in large crops, generally; though there are many that have gone to fight for their country, yet those that are left at home with their shovels and hoes, seem to think that they can do as much for their country by cultivating the land, as their brothers who have gone to the field of battle. The trees are all leaved out, and the plum trees are in full bloom; the past winter has been very favorable for fruit trees, as there was no thaw to start the sap, nor sudden freezes, which I think have done more to shorten the lives of the apple trees than anything else. Where were once raised 600 and 1000 bushels of apples, are now raised only 12, 20 and 30 bushels, and in some places not any; there is not an orchard within my knowledge, where there is not more or less of the trees dead, and it will not be long before the farmers of Vermont will depend, in a great measure, on other States for their fruit, while they have as good soil for fruit raising as any other State. The trouble is, they do not take good care of their fruit trees; they have heretofore raised their own fruit, but they think it won't pay to trim up the old orchard, in which more than half the trees are dead.

The ground is quite dry, as there has been very little rain since the farmers commenced work on land. It has been a very good time for lambs this spring. There are quite a number of sheep in Northern Vermont; a great many of them are the Merinos, which produce an excellent quality of wool, but are not large enough for mutton, and there is a manifest degeneracy in them. They require more care and better food than the common breed, and also require a temperate climate.

What breed of sheep is best for a farmer to keep for wool and mutton? The sheep-growers are apt to let their flocks degenerate in consequence of the bad selection of males and injudicious crossing; these points require unremitting attention, for it has been proved by experience that even the best breeds lose a portion of their good qualities, if the necessary crossing is not seasonably undertaken. The separation of the flocks into sections, or families, should be strictly observed; the product of each animal should be carefully weighed, and registered from generation to generation, and as soon as it is perceived that a fleece is diminishing in weight, or deteriorating in quality, a change in the male animal should be made immediately. H. W. J.

Orleans County, Vt., 1862.

For the New England Farmer.

"TWIN LAMBS."

MR. EDITOR:—Many of our farmers are of opinion that the rearing of two lambs, yearly, from one sheep, is more remunerative than the rearing of one. I think this opinion is erroneous, as any one who will take the trouble to investigate the subject must readily see. I believe every one will admit that it is more profitable to keep good stock than it is to keep poor, and we certainly cannot produce as good when one animal is suffered to rear two, as we could if it only reared one.

For instance, to illustrate the matter, we will suppose that 100 sheep, of the value of $300, produce 100 lambs. Ten per cent. of those lambs will probably die, leaving 90 to be reared. 90 lambs, at one year old, after being sheared, will be worth $3 per head. They will shear about 4½ pounds of wool per head, or 405 pounds.

On the other hand, if every sheep produces two lambs, from 100 sheep we shall have 200 lambs. Of course, these will not be as large and strong as the others, consequently, a larger proportion will die, undoubtedly twenty per cent. at least, leaving 160 to be reared. These, at one year old, being smaller and less thrifty than the others, will not be worth over $2 per head. For the same season they will not shear over 3 pounds of wool each, or 1½ pounds per head less than the first, amounting to 480 pounds. The wear and tear on the invested capital or original stock of $300 in the latter case must be at least fifteen per cent. greater than in the former, amounting to $45. The cost of keeping the surplus lambs, 70 in number, one year, would be at least $60. The result, as near as I can estimate it, will be as follows:

90 lambs, 1 year old, $3 per head	$270
405 pounds of wool, at 40 cents per pound	162
Whole amount	$432

On the other hand,—

160 lambs, 1 year old, at $2 per head	$320
480 pounds of wool, at 40 cents per pound	192
Gross proceeds	$512
Deduct for extra wear and tear on capital	45
" " keeping 70 surplus lambs	60
Net proceeds	$407

Leaving a balance of $23 in favor of the 90 lambs. I believe, Mr. Editor, that this is a fair and candid estimate. If any of the advocates for rearing twin lambs can show a different result, I, as well as many others interested, would like to hear from them. A CONSTANT READER.

Salem, N. Y., May 28, 1862.

For the New England Farmer.

THE STUDY OF NATURAL HISTORY.

The importance of a knowledge of natural history to the agriculturist has become appreciated to a certain extent, but not, unfortunately, to nearly its true value. That the agriculturist can be successful only when he knows the capabilities of Nature, her provisions and her laws, is plainly apparent, for in no calling can success be calculated on, unless after a deliberate and careful examination and comparison of the assistances which may be rendered to overcome obstacles which exist, determining their relative and individual strength, the one to balance or overcome the resistance of the other.

For instance, the merchant has to overcome dificulties caused by competition in the demand for goods, of which there is an uncertain supply, by fashion, by the uncertainties of existing national relations, which cause fluctuations in the money market, and more or less disturb, and sometimes embarrass his operations, or cause them to result disastrously. To overcome these, the merchant carefully acquaints himself with the condition of markets and the prices of those goods, which, to him, are specialties; he calculates the chances of a great or small supply, caused by a great or small production; attentively watches the fluctuations of the money market, and the various political questions and changes which may arise, and analyzes them, to discover the value they may hereafter possess to his operations. Observing these things, and knowing the balance to be favorable, with an allowance for contingencies that may arise, he is generally enabled to conduct his business with fair, or even great chances of success.

The obstacles the farmer has to overcome are numerous, but they are all presented by Nature, and the remedies she affords are sufficient to keep the balance perfect, if they are permitted to act vigorously, and in their proper places. It is important, therefore, that he should be acquainted with, and not injudiciously interfere with the beautiful laws by which she regulates the phenomena which are operating for, or against him, but avail himself of those that are acting for his benefit, and even stimulate them to still greater exertions. There is often, among farmers, a contempt for scientific men, or those who make a study of Nature, but such do not reflect that no one is so much a naturalist as they; that every operation on the farm is but an experiment in one of the branches of natural history; its success but another scientific triumph, its failure usually the result of ignorance of some great law; very seldom caused by unforeseen or uncontrollable accident.

The means employed to maintain the equilibrium, in animate and inanimate Nature, are, of course, different, but that they are adequate to check the preponderance of any element, or its disproportionate increase at the expense of others, is plainly manifest. In inanimate Nature, the effects of different elements are modified, or counteracted, by others to a degree, or entirely opposite in Nature. For instance, the effects of light, although absolutely necessary to a healthy condition of animal and vegetable life, require modification, for the reason that constant exertion necessarily attendant on the presence of light, would be highly injurious in consequence of the exhaustion which would follow; therefore, the absence of light (darkness) is absolutely necessary at intervals to secure the rest demanded by the system which has expended a portion of its vital power while in activity. Carbonic acid gas, although absolutely necessary to vegetable life, unless counteracted by the presence of oxygen, is fatally injurious to animal life, but Nature has wisely provided that animal life shall reject carbon, thereby furnishing food for the vegetable, which, in its turn, rejects oxygen for the support of animal life.

In animate Nature, different tribes are employed to destroy others which are injurious and often prolific. That the destroyers may not increase disproportionately to the others, they are less prolific in proportion to their strength and rapacity; for instance, many families in the Herbivora (vegetable devourers,) are injurious to the farmer in consequence of their depredations on his crops. They are generally very prolific, and their rapidly-increasing numbers, depending on vegetable life for food, would, unless some check were provided, completely exhaust the supply of food which is necessary to their existence; but Nature has created other animals which prey on them, and keep them reduced within a necessary limit.

Myriads of insects are created, and their numbers, like the locusts of Egypt, or the army worms of our own day, would overrun and devastate the land, were not some check provided: but in their own class are tribes created which prey upon them, and of mammals and birds whose orders subsist upon them.

How important it is, therefore, that the farmer should know and protect those elements that are assisting him: how necessary it is that he should carefully investigate the phenomena of Nature, and appreciate the value of even its minutest help. Let him, therefore, observe and study; let him encourage the spirit of inquiry that he may see dawning in the minds of his children, and teach them to distinguish and protect the vilest worm, if its life is spent in assisting him. If it is true "that he who has made two blades of grass grow where but one grew before, is a public benefactor," how valuable must he be whose life's work has enabled him to say that fertile and flourishing acres had come where nought but a desert and wilderness was before.

EDWARD A. SAMUELS.

FERTILITY OF WHEAT.—A Mr. A. W. Parker, of Cheam, Surrey county, England, some years since, instituted a very curious experiment in the management of wheat, of which we give the following abstract. In July, he deposited *one kernel* of wheat in a common garden pot; in August, he divided it into four plants, and in three weeks he again subdivided these into twelve, and so on until November, when the whole number from this one kernel amounted to fifty-two, when they were all set in the open soil. In July following, twelve were found to be dead, the remainder in full health. On the 19th of August, the crop was harvested, and the produce was 1972 stems, averaging fifty grains to the stem—being an increase of 98,600 grains! How wonderfully hardy and prolific is this plant, so indispensable to the com-

fort and support of man! Were it all lost, by some terrible revolution, and but a single grain left, under such a process as we have just related, how soon could all the fields of the world be smiling again with this golden and invaluable crop!

For the New England Farmer.

WHY ARE SO FEW YOUNG MEN FOND OF FARMING?

MR. EDITOR:—Though in this country a majority of persons are probably engaged in agricultural pursuits, I have the impression that comparatively few young men are really fond of farming. Why do the sons of farmers so frequently forsake the calling of their fathers, to engage in other occupations? It seems to me, one and perhaps the principal reason may be, because parents do not take sufficient pains to make home and the business of farming pleasant and attractive. Is it enough for them to clothe and feed the bodies of their children, but neglect to furnish the daily food which is necessary for the nourishment and full development of the social as well as the intellectual and moral faculties?

Are not boys upon the farm too often driven, as it were, to their work, instead of being so taught as to become interested in their employment, and thus learn to love it, and perform the labor as it should be performed by intelligent and accountable beings?

> "Will not the sons, if rightly taught to toil,
> Delight through life, to cultivate the soil?
> And though they leave the spot which gave them birth,
> Still draw their sustenance from Mother Earth?"

Another reason to which I will allude, though with diffidence, (for it is rather a delicate matter,) is the influence of young ladies. Do they not sometimes, to say the least, slight and shun the hardy, sunburnt sons of toil, and bestow their smiles and hearts' affections upon those with smaller, softer hands, and alas, too oft, with corresponding brains!

A third reason may be the position, or place which farmers occupy in the community. Though not generally regarded as "mudsills," they may, perhaps, with propriety, be compared to the firm, substantial foundations of a building; for upon them the whole superstructure of civilized society is built and depends for its support. In viewing a public edifice, we seldom observe the plain, unpretending, yet essential foundation on which it stands; but take particular notice of the building itself, upon which art and adornment may have been lavished, almost regardless of expense. So the learned, cultivated and refined members of society, by being conspicuous, attract attention, while the situation of the farmer is such that he is sometimes considered beneath observation, especially in populous, aristocratic places, which abound somewhat with snobs and nabobs.

The impression which prevails, at least to a considerable extent, that farming is not profitable, might be mentioned as another reason. But as the profitableness of farming is a "much mooted" question, and one which some of your correspondents desire to have discussed again in your paper, I will reserve that subject as a sort of groundwork for another communication. A. C. W.

Leominster, 1862.

MAKE FARM LABOR FASHIONABLE.

At the base of the prosperity of any people lies this great principle—make farm labor fashionable at home. Educate, instruct, encourage; and offer all the incentives you can offer, to give interest and dignity to labor at home. Enlist the heart and the intellect of the family in the support of a domestic system that will make labor attractive at the homestead. By means of the powerful influences of early home education, endeavor to invest practical labor with an interest that will cheer the heart of each member of the family, and thereby you will give to your household the grace, peace, refinement and attraction which God designed a home should possess.

The truth is, we must talk more, think more, work more and act more, in reference to questions relating to home.

The training and improvement of the physical, intellectual, social and moral powers and sentiments of the youth of our country, require something more than the school-house, academy, college and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen—in a word, around the hearth-stone at home.

Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society, if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the man-saving influence of the family government. The nation must look for virtue, wisdom and strength, to the education that controls and shapes the home policy of the family circle. There can be no love of country where there is no love of home. Patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from fountains that gush out around the hearth-stone; and those who forget to cherish the household interests, will soon learn to look with indifference upon the interests of their common country.

We must cultivate roots—not tops. We must make the family government, the school, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artisans, engineers, geologists, botanists, chemists—in a word, practical men. Their eyes must be turned from Washington to their States, counties, townships, districts, and homes. This is true patriotism; and the only patriotism that will perpetually preserve the nation.—*Gov. Wright.*

LUBRICATORS FOR BULLETS.—Formerly, tallow combined with wax was generally used as the lubricating composition for cartridges. It answered very well, when the old brown-bess musket was in general use, but since the rifle has become the general weapon of the soldier, this lubricating compound has proved to be unfit for cartridges. When tallow is kept in contact with a lead bullet, it exerts a corroding action on the metal, and a crust forms on the bullet, thus increasing its size, and rendering it incapable of being rammed down with ease and rapidity in a rifle. It has been found that paraffine does not exert any chemical action upon the lead, and hence it is now generally employed as the best cartridge lubricant. It is one of the products of petroleum and coal oil.

THE CURCULIO.

Mr. R. H. Phelps, of Windsor, Ct., after carefully observing the habits of this great enemy of the fruit-grower, some time since, announced in the *Homestead* his conviction that the black knot or wart on plum trees is caused by the curculio, and is one of the mediums by which it perpetuates its species. Previous experimenters and observers had demonstrated the fact that the brood which is hatched from eggs deposited in plums and other fruit, instead of remaining dormant until the next year, as had been supposed to be the case, came from the ground in some three weeks after leaving the fallen fruit, perfect insects. And here, so far as we are aware, our knowledge of the history of the curculio ends. How do this second generation live? how do they perpetuate their race? and what becomes of them? are questions that have been asked, but not satisfactorily answered. Mr. Phelps believes that, "as the second brood finds no place for propagation after the fruit has fallen, it resorts to the bark of the tree, and there deposits its eggs." To meet the inquiry, how do the grubs hatched in the knots, reach the ground? which might be asked by those who regard the falling of the fruit as the natural way of descent for those bred therein, the writer says: "They pass down to the ground by a thread which they spin in their descent, while those in the plum pass into the earth after the fruit drops." He does not say that he has witnessed such descent—he barely states the fact, and then adds: "The last brood of the season remains in the ground in the larva state through the winter, and I now have specimens which can be examined by any person. One of them in particular has taken a notion to spin its cocoon directly between the glass of the goblet and the earth which it contains, affording a lucky chance for observing its operations."

Mr. Phelps calls attention to the facts that the black knot is seldom or never found upon the body of a full grown tree, or where the bark is hard and thick, but chiefly on the branches and tender twigs, where the insects can easily puncture, and that a far greater number of knots make their appearance on the tree the latter part of the season, as strong presumptive evidence of their being caused by the curculio. Maggots or grubs have been noticed by others in the black knot, but whether as cause or effect has not been positively known. Mr. Phelps found in a single knot forty-eight grubs, and is very certain that most contain more than one egg or larva. That these are embryo curculios he is quite positive, for reasons which we give in his own words:

"On the 28th of June last, I took several worms from the knot of a plum tree, and put them in a cup of soil in a warm place, and in 19 days from that time one of them turned into the chrysalis or pupa; in a few days more it cast off its skin, and passed from a chrysalis to a perfect weevil or curculio. This specimen had been disturbed so often in examining it, that it formed no cocoon for its transit. In every other instance, the grub formed a cocoon by continually turning and twisting its body, thereby making a cavity adapted to its size by gluing together the particles of dirt with a gum or web from its mouth, with which it lined its cell, in which it changes from the larva to the chrysalis, and thence emerges the perfect weevil or curculio, and ready to begin its depredations. The difference in the period of its change appears to depend upon the maturity of the worm, as in some instances they changed under my own eye in one day after entering the earth. The time occupied in this transformation to the chrysalis was only about one hour. On the 23d of July some worms taken from a plum, and others from a knot on the same limb, were put into two separate pans of earth, and each labelled. One from the plum changed to the chrysalis the 26th, and two from the knot the 27th. These grubs were precisely alike in appearance, being about three-eighths of an inch long, of a yellowish white color, and with yellow heads. Later in the season they incline more to a reddish color. The pupa is of a perfectly white color, almost transparent."

This theory affords some grounds for the hope that, by the seasonable destruction of these unsightly excrescences, we may diminish more or less the numbers of an insect which threatens to prove the worst enemy the fruit-grower has to contend with. In common with plums, our apples and pears suffer by the ravages of the "first brood" of curculios; but as the branches of these trees show no black knot, how is the race perpetuated in our common orchards?

PROTECTING ANIMALS FROM STORMS.

I believe that farmers, generally, are not aware how much loss they sustain in the flesh of their domestic animals, and how much they suffer during cold storms of rain in the summer, or at any other season of the year. Warm showers never injure animals; indeed, they appear to have a good relish for such a sprinkling as they frequently get, providing it is not as cold as ice. Most animals will endure pretty severe cold as long as they can keep dry; but as soon as their bodies have been wet and kept wet, evaporation commences. And as evaporation is a cooling process, the heat of their bodies is carried away very rapidly; and the sudden transition from heat to cold chills them in a very short time, and injures them more than a severe storm in winter.

Animals will endure a very sudden change from cold to heat, with impunity; but sudden changes from heat to cold are often attended with very injurious consequences. We are apt to think, because it is summer, or not freezing weather, that a storm of rain will not hurt our animals. But could they communicate to us their feelings during a storm of cold rain, there would not be so much negligence about protecting them, especially during the cold and stormy days and nights of autumn.

I well remember, that about twenty years ago, there was a severe rain storm in the month of June; and although our sheep had been shorn more than two weeks we thought they ought to be brought home to the barn. But many of them were so cold and feeble in consequence of the rain that it was necessary to go after them with a wagon.

About the first of July, 1861, there was another very cold storm of rain, which swept away hundreds of sheep in the town where I reside. One farmer lost about sixty of his choicest sheep, although they had been sheared several days before the storm came on. I have heard of more than three hundred lost during the storm.

It is infinitely better for animals to keep them in a stable or shed, where they cannot get a mouthful of food for twelve successive hours, than to allow them to be exposed for only two hours to a storm of cold rain.

When I was accustomed to keep sheep I was always careful to let them have a benefit of a shed, if they needed it, not only in winter, but during the summer; and it was very unusual that our horses and neat cattle were left for one hour in the field during a cold storm. Cold storms not only make horses look bad, but they do really injure them, by rendering them stiff and dull; and they often contract severe colds, which, in many cases, will superinduce catarrh and glanders.

Young calves and colts often suffer extremely from exposure to cold storms, even in summer; and to shelter them, will be time and money well appropriated. "A merciful man regardeth the life of his beast."—S. E. T.,—*in Country Gentleman.*

THE JAPANESE IN ENGLAND.

The London correspondent of the Manchester *Guardian* writes as follows:

The Japanese Ambassadors are the most indefatigable of "lions." They are to be met everywhere, and go through their sight-seeing with a stolid patience which does as much credit to their strength as to their self-control. They prefer London to Paris, as they have not been made so much fuss about, and are allowed to see things more in their own way, and at their own convenience. Paris was done for them by official programme. The draughtsman is really a clever fellow in his art, and perfectly indefatigable as a sketcher. He carries the breastfold of his robe filled with note books, in which he works with great rapidity, and in outline. His drawings of animals at the Zoological Gardens are described to me by a friend who has seen them—for I have not yet had that privilege—as singularly faithful and spirited, and as showing a full knowledge of perspective. The monkeys and the bears were his favorite subjects, as affording most scope for the fun which evidently enters very largely into their way of viewing things. They are not at all carried away by the English ladies. On the contrary, they do not scruple to say that they think us Westerns, of both sexes, a singularly ugly race. It is very wholesome to be reminded of the difference of tastes in this way, for of all the ugly specimens of humanity, in Western eyes, the Japanese Embassy, by universal admission here, includes the flower.

For the New England Farmer.

BORROWING AND LENDING.

Mr. Editor:—The practice of borrowing and lending may be well enough, sometimes—in fact, may be necessary, in some cases; but they should both be kept within bounds, and under proper regulations. This practice, I suppose, is nearly as old as the creation. Society could not well subsist, if neighbors were not disposed to accommodate one another in this way. Let a man's business or wealth be what it may, he cannot be so independent, as at no time to stand in need of borrowing. Unforeseen accidents may happen at such a time, and in such manner, as to make it impossible for him to purchase the thing he immediately wants. The thing may not be for sale anywhere in the neighborhood, so that he is obliged to borrow, or stop the work.

But this practice may be carried too far. It may be carried so far as to be prejudicial both to the borrower and the lender. It ought to be kept under such limitations as to be mutually beneficial. "The borrower," says Solomon, "is a servant to the lender." This is sometimes the case. But it more frequently happens, that the lender is a servant to the borrower, and is obliged to serve him, not only in lending him what he wants to borrow, but in running after the things which have not been returned. If the borrower sets out with a determination to live by borrowing, without any intention of returning, or repaying in kind, his intention will soon be discovered, and he will find it impossible to borrow of any who are not slaves to his wishes. So, too, if he habitually neglects to return what he has borrowed, he will find that the lender will not endure the servitude of running after the things which have not been returned.

They who lend household articles, or mechanics' tools, or implements of husbandry, generally expect to receive their own again unhurt—the very thing, where it can be done; where this cannot be done, something equivalent. But if they find that what is lent is lost, or forgotten, or broken, or wilfully retained, they will soon grow weary of obliging in this way; more especially if they be ill treated when they go after and ask for what belongs to them. The longer a thing has been lent, the more likely it is that it will never be returned, without being sought for by the lender, which is always very unpleasant business.

The lender ought always to be the judge of the propriety of lending, or withholding his hand, let the borrower clamor as he may. For if the lender is obliged to lend whatever an unprincipled borrower wants, he can with propriety call nothing his own, let him possess what he may; for there will be borrowers enough to deprive him of all his property. Still, it is always best to cultivate an obliging disposition. He who is altogether unmindful of his neighbor's interest, may expect to be paid down in his own coin; for his neighbor will be unmindful of him. Men grow tired of lending to those who never think of returning. In such cases, the borrower is worse than the beggar. The beggar does not deceive, as in his case no return is expected. The borrower may do much injury to others; the beggar cannot do much harm, as he has no power.

Borrowing frequently occasions the loss of much

time and labor to the lender. Besides, it tries his patience to be obliged to run over to neighbor Slack's after the tools he lent him three months ago, and after his arrival there, to be obliged to wait two long hours, while neighbor Slack and his boys are rummaging all over the farm to find the tools which were thrown down in the very place where they were last used. No person ought to borrow what he does not intend promptly to return. For if lenders are obliged to run after their own tools, every time they want to use them, they virtually become slaves to the borrower.

In money matters, they who lend money for the accommodation of others are entitled to a prompt return at a specified time, with interest thereon. It is not right for a person to borrow money and promise to pay what he knows is not in his power, and never will be. This is fraud, and in this way many are ruined. It is wrong to make promises that cannot be performed, especially when there is no intention of performing them. Still, where unexpected losses and disappointments take place, allowances should be made. For there is no fencing against misfortunes. But where a man acts with fraudulent intentions, he ought to be condemned. For many have been deceived and ruined by fair promises and worthless securities, when in fact the promisor had no intention of fulfilling his engagements.

The habit of borrowing and lending farm tools, and other articles, where there is no great necessity for it, and which a little prudent forethought might prevent, is a very bad one, because it leads to unpleasant results, and creates much ill feeling in the neighborhood. It makes the lender a servant to the borrower. Whenever he misses any of his tools he is obliged to run over to neighbor Slack's, or to neighbor Easy's, or to neighbor Doolittle's, and see if he can find them. He may have forgotten to which of the three he lent them. And after spending the whole forenoon in pursuit of his tools, he returns to his work with feelings better imagined than described. No one would be unwilling to lend any of the common articles in use, if he could have a reasonable assurance that they would be promptly returned. But to be obliged to run after them every time they are wanted, is a great trial to one's patience.

Warwick, Mass., 1862. JOHN GOLDSBURY.

REMARKS.—Excellent. If every farmer in New England would read the above, and be guided by the reasonable and incontrovertible truths which it lays down, there would be greater prosperity and a less amount of anxious, unhappy feeling, all over the land.

DOG POWER.

Dog power is coming into use in New York to a large extent. Why it has not before been applied extensively all over the world, and those huge mastiffs allowed to lie about in the sunshine, and consume as much food as the children of a poor man, passes comprehension. The German ash-mongers and rag-pickers are teaching people wonderful lessons in the way of economizing power. Three stout dogs, harnessed to an ash-cart, draw a load nearly equal to a horse. They work with a will, and guided by a man—and often a woman—in the shafts, draw a load which no individual, unaided, could master. It is wonderful to see their strength, and remarkable docility and teachableness. When the master stops, they instantly rest, and at the slightest signal they straighten out their traces. Only a kind word, often a mere look, from the brute who so often kicks them, they gratefully receive. More than that, they recompense it with eager effort and wonderful toil at the drag rope.

THE TIDES.

These phenomena have, in all ages, excited curiosity, and in many instances they have produced wonder at their extraordinary height and fury. It is related of the soldiers of Alexander the Great, who were natives of the Mediterranean shores, that when they reached the confines of the Indian Ocean, and saw its waters rolling up to a great height, and then flowing back, twice every day, they became alarmed, and attributed the phenomena to a special interposition of the deities of the country which they had invaded. Various remarkable theories have been advanced regarding the tides. Many of these are so truly absurd that it is hardly worth while to refer to them. Persons find it difficult to understand why the tides are higher at one time than another, and why they rise to the height of sixty feet in the Bay of Fundy; forty feet in the ports of Bristol, England, and St. Malo, France, and only rise to a few feet in height at New York and other places, while they are scarcely perceptible in the Baltic and other seas. Descartes was the first philosopher who advanced the theory that the tides were due to the influence of the moon, but Newton was the first who worked out the problem and discovered the true cause. Descartes believed that the moon acted on the waters of the ocean by pressure; Newton demonstrated that it acted on the ocean by attraction; that instead of pressing the waters it rolled them up directly under it, and also at its antipodes at the same time, thus producing the two tides every day. The tides are attractions of both the sun and moon. If the earth had no moon, the attraction of the sun would produce two tides every day, but their ebb and flow would take place at the same hours, not varying as they do now; these tides would also be much smaller than those of the moon. Although the mass of the sun is far greater than that of the moon, and though attraction is in proportion to the mass, yet it is also inversely as the square of the distance. As the sun, therefore, is four hundred times more distant than the moon, the attraction of the waters of the sea towards the sun is found to be about three times less than those of the moon. There are really two ocean tides, the lunar and solar, but the latter is absorbed by the former, which is wholly observable in respect to the time, the solar only, as it influences the height of the tidal wave. That caused by the moon is three times greater than that of the sun, and it follows the moon's motion around the earth, rising and falling every twelve hours, and each succeeding tide later by three-quarters of an hour than the preceding one, exactly in accordance with the positions of the moon, or, as it is commonly called, its rising and setting.

THE HONEY-BEE'S SONG.

WHAT THE BEE SINGS TO THE CHILDREN.

I am a honey-bee,
Buzzing away
Over the blossoms
The long summer day;
Now in the lily's cup
Drinking my fill,
Now where the roses bloom
Under the hill.
Gayly we fly,
My fellows and I,
Seeking the honey our hives to supply.

Up in the morning—
No laggards are we—
Skimming the clover-tops
Ripe for the bee,
Waking the flowers
At dawning of day,
Ere the bright sun
Kiss the dew-drops away.
Merrily singing,
Busily winging
Back to the hive with the store we are bringing.

No idle moments
Have we through the day,
No time to squander
In sleep or in play;
Summer is flying,
And we must be sure
Food for the winter
At once to secure.
Bees in a hive
Are up and alive—
Lazy folks never can prosper or thrive.

Awake, little mortals,
No harvest for those
Who waste their best hours
In slothful repose;
Come out—to the morning
All bright things belong—
And listen awhile
To the honey-bee's song.
Merrily singing,
Busily winging,
Industry ever its own reward bringing.

MOTHS.—A correspondent of the London *Field* recommends tallow candles, (common,) done up in paper, and put in the sack or drawer with cloths, to prevent moths destroying the cloth.

REMARKS.—Nonsense. The moth-miller cares no more for a tallow candle than for the fifth wheel of a coach. Most of our insects are very hardy, caring little for wind or weather, and will never "die of aromatic pain." We once packed some small skins in the centre of a cask of tobacco leaf and stems, but the miller went there, deposited her eggs, and the furs were ruined. This shows that they are not at all delicate, and care nothing for tobacco, camphor, or even tallow candles. Quite likely, some person had a *tight* closet where there happened to be a tallow candle, and the safety of the furs was imputed to some efficacy in the candle, rather than to the *tightness* of the closet. Expensive cedar closets are frequently constructed, with the idea that the rather pleasant odor of the cedar is sufficiently disagreeable to the moth to keep him away from articles of clothing deposited there! This is a mistake. The strongest instinct prompts the miller to seek the means of perpetuating its kind, and no trifling impediment will prevent it.

But the preservation of furs, or articles of clothing, is perfectly simple, cheap and easy. *Shake them well, and tie them up in a cotton or linen bag, so that the miller cannot possibly enter, and the articles will not be injured,* though the bag is hung in a woodhouse or garret.

This is cheaper than to build cedar closets, and better than to fill the bedclothes and garments with the sickening odor of camphor, tobacco, or any other drug.

TAN-BARK AS A MANURE.

MESSRS. EDITORS:—I have observed various statements as to the nature and value of spent tan-bark applied to crops or tillage land. Having made some experiments in a small way, bearing on the question, I will give the results.

On the 1st of July I sowed broadcast, on good alluvial soil, well-pulverized carrots, ruta-bagas and cabbage. I covered them with three-fourths of an inch of tan bark, quite fresh from the tannery. The growth was good, and crop as large as the season would allow.

I also planted potatoes in the same way, covering with four to six inches of fresh tan bark. They had no other care, the weeds not growing. The crop was fair under the circumstances—indicating no bad effect from the tannic acid of the covering.

I also raised good corn where tan was mixed with the soil in the proportion of one to four.

From these facts I have not hesitated to use it freely as an absorbent in my stables. My cows are bedded with it to a depth of three or four inches. It is hoed back into the drop as fast as it becomes wet. It then becomes thoroughly mixed with the manure, making about double the bulk. It is daily loaded into a cart and hauled to the fields, where it is deposited in heaps.

The great advantages I get are a more perfect distribution of the manure in spreading—economy in getting all the manurial qualities on to the ground—neatness of stables, and saving all the trouble in plowing, drilling in seeds, and cultivating, when coarse straw manure is used, as it must be, or one year lost in rotting it.

Dried muck is undoubtedly the best. But I can't get it; and it is much more expensive in procuring and hauling, where tan is within reach.

My land is alluvial, a little inclined to be heavy, and I anticipate good results from the light, open nature of the tan.

I procure my supply (about 150 loads) in dry weather, and place in the bottom of a bay, convenient for use. Frost only crusts over the top, giving no trouble.—*Country Gentleman.*

THE reasoning power is the corner-stone of the intellectual building, giving grace and strength to the whole structure.

For the New England Farmer.

MR. A. G. SHELDON'S FARMING.

MR. EDITOR:—Spending a few days among the scenes of my childhood, I visited the residence of your correspondent, Mr. A. G. SHELDON, the "Wilmington Farmer," whose "Practical Observations on Farming and Stock Raising" are in process of printing, and about to be offered to the public. I had the pleasure of looking at his orchard, now in full bloom, from side to side, and a more beautiful sight of the kind I never beheld. Nature seems to be very propitious this year; certainly she promises fair for a good crop of apples. The trees, set in straight rows, with smooth, healthy trunks, and well expanded tops, tell a fair story for the hand that reared them.

Passing through the orchard, we went through the reclaimed swamp, and what a contrast met my gaze. Twenty acres of beautiful, smooth, mowland, just as green as a rich lawn in spring, took the place of the sterile, blueberry swamp that occupied the ground when I was young. What can not the hand of industry accomplish? This land promises to yield a bountiful crop for years to come. Sure, it must be our best land in New England.

Where this beautiful orchard now stands, was, a few years since, a ledgy hill, full of stones and covered with stunted pines. Taste and industry have made it what it now is, not only beautiful to view, but generally bringing to its owner a handsome income. My mind involuntarily came to the conclusion, that the man who had brought about such a change in the face of nature before me, must, by condensing the results of his experiments and observations, bring out a book that would be worth double its cost to the young yeomanry of New England.

The piggery and barn were next visited. Two model sows, heavy with pig, attracted attention. In form they were symmetrical. On inquiry, I was informed by Mr. S. that he had named them the "Bay State breed." He said they originated from the "Mackay," the "Columbia County," the "Cheshire County," and several other breeds mixed; that they were the best breed and cheapest kept of any in market. And he comforts himself with the hope that in a few days he shall offer for sale some noble pigs, that have never taken a ride in the cars, or visited the Brighton pig-pens.

In looking over the neat stock, I observed three pairs of heifers of different ages, as nicely matched as you ever saw three yoke of oxen in a team. There were one pair of blacks, bearing strong marks of the old black Spanish, one pair of light reds, with long horns, showing the Denmark strongly developed; and one pair of twins, dark reds, resembling the Devon.

These mixtures form our "Native Stock," and must be fine for dairy uses; at least they appear so, judging by the large milk sacks they carry. The herdsman informed me he had been obliged to reduce the keeping of the long-horned reds to coarse meadow hay, in order to dry them before calving. And he likewise said of one of the blacks that had not yet calved, he had milked her once per day for some time, and that day twice to prevent swollen udder.

I think our brother farmers and mechanics, dealing in stock, would do well to select the best breed, not only in cows, but hogs, and look well to purchase those that are free from disease.

East Wilmington, 1862. E. E. CARTER.

OPEN AIR GRAPE CULTURE.

In the *Farmer* of May 31, we noticed a new work by Mr. JOHN PHIN, upon the subject of *Open Air Grape Culture*. A further examination of the book has convinced us that some of its pictorial illustrations and teachings may be made very useful to a large number of our readers. We have, therefore, sent to the Publisher and obtained several cuts, which will be quite useful to those not entirely conversant with the management of the grape vine during the several stages of its growth. Some of these cuts relate to the vine in its earliest condition, and show the manner of setting the plant, disposition of the roots, and raising plants from layers. Those that we give to-day relate to the care of the vines during the first, second and third years.

The cut which follows illustrates the author's idea of mulching the plant. He says, "If an abundance of grassy weeds, litter, stable manure, or similar matters can be obtained, the best plan is to mulch the plants deeply for at least three feet every way from the stem,"—and adds, "that, before applying mulch of any kind to a young vine it will always be advisable to raise the soil around the stem to the depth to which it is intended to lay the mulch, as represented in Fig. 1.

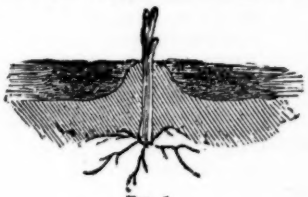

FIG. 1.

LATERALS are small shoots which spring from the axils of the leaves, (the point which they join shoot.) As these laterals absorb much of the nutriment which would otherwise go to the increase of the stem, they should be carefully pinched out after they have made one or two leaves. If removed before they have made some growth, the bud at their base is very apt to *push*, as it is called (that is, to grow,) which should be avoided, if possible.

Fig. 2 shows a young shoot of the current year with a lateral (B) springing from the base of the leaf L. This lateral should be pinched off at the cross line. If removed entirely or too soon the bud (C) will be apt to push, and destroy our prospects for next season.

FIG. 2.

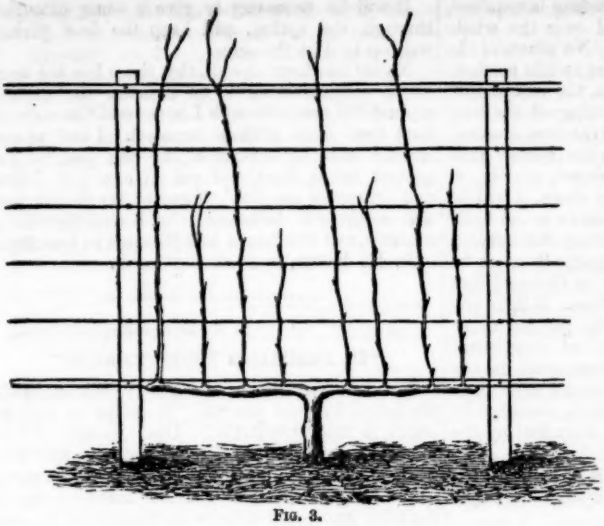

Fig. 3.

Winter Protection of Young Vines.—At the close of the season, the vines may either be bent down and covered with earth in the manner usually adopted for covering raspberries, or they may be left upright, and tied to the stakes, a mound of earth being raised up around each, such mound being at least 18 inches high. The soil of which it is made should be taken from the centre of the rows, as, if we take it from about the plants, we only cover the stem to expose the roots.

Where the vines are left tied to the stakes, we prefer to leave them unpruned. True, most of the wood gets killed, but this is of little moment since it is to be nearly all cut away at the spring pruning.

Management during the Second Year.—As soon as the severe frosts of winter and early spring have passed away, uncover the young vines, and if not already pruned, cut them to a good bud within 9 to 14 inches of the ground. They should be shaded for a few days from the sun and cold, which may be very well done by sticking a shingle before each, though two shingles placed so as to form an angle in which the vine may stand, will be better.

Management during the Third Season.—The trellises having been constructed in such a manner, that the lowest slat or wire may be just below the base of the second year's shoots, that is from 9 to 14 inches above the surface of the ground, these two shoots should be firmly, though not tightly, tied to the lower slat, and all buds should be rubbed out except three on each arm, (or shoot,) thus leaving six on each vine. Each of these buds should produce a shoot which, if the ground has been in good condition and the plants healthy and properly set out, would reach from 12 to 25 feet unless stopped, and as it is upon every second one of these that we depend for our next year's supply of fruit, they deserve and will require great care and attention in order that they may finally be of equal strength and well ripened. Every second shoot should be stopped when it has made a growth of about two feet, and if any of the others should so far outstrip their compeers as to reach the top of the trellis much before them, they should be stopped also, though except in the case of excessive growth all the shoots had best be allowed to grow on until the first of September, when they may all be stopped at once, unless it be deemed best to allow the weakest a few days' longer growth, in which case it is surprising how soon they will overtake their companions.

Stopping, or pinching, consists in breaking off the end of a shoot, and its immediate effect is to arrest the further growth of the cane, or at least its further lineal development, for the time being.

Management of Fruiting Vines.—At the close of the third season we ought to have a vine such as is shown in Fig. 3, consisting of a stout, strait, clean stem, 9 to 14 inches high, from the top or head of which springs two horizontal arms, each bearing two well ripened canes, 8 to 10 feet long, and two smaller shoots of from two to five feet. The two canes ought next season to produce three to five pounds of fruit each, and their proper care during the winter is worthy of our best efforts.

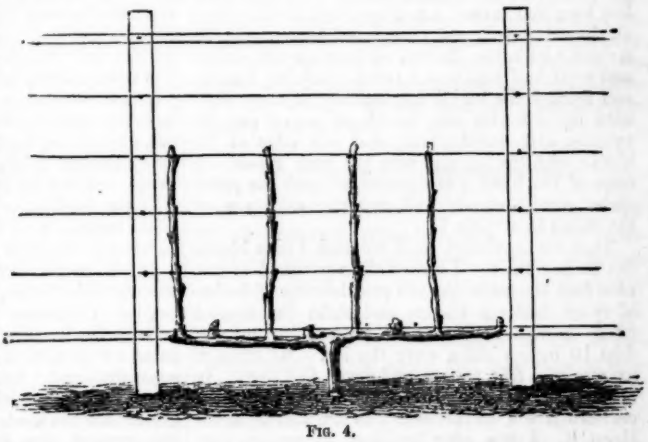

Fig. 4.

Winter Protection of the Fruiting Canes.—The method which we have proposed, is to place the trellis 8 to 12 inches in advance of the vine, the stem being brought forward beneath the first slat or rail, and tied up as usual. It will

be readily seen that very little bending is required, and even that is so distributed over the whole stem that no injury can result. No practical objections that we are aware of exist to this method.

Before bending down the stem, the vine should be pruned. This consists in cutting off the long shoots to a length of four feet, (the first season,) and the alternate short ones to the *lowest good* bud. The vine so pruned is shown in Fig. 4. Then the stem, having been bent down, it will be easy to fold the flexible young canes so as to lie compactly together, when they may be covered with earth. The soil for this purpose must be light and sandy, and should be so disposed that water will not penetrate to the vines. If light soil cannot be had, the vines may be pegged down and covered with the branches of evergreens, though it is improbable that these could be obtained in sufficient quantity to protect a large vineyard. Leaves or straw would answer, though they might harbor mice, which would soon destroy the vines.

The vines should be left covered as long as possible, but must be exposed before the buds begin to push in the spring.

A CHEAP ICE HOUSE.

I saw in the *Farmer* of Nov. 21st, a plan for an Ice Stack which may be a good one, but with your permission I will lay before your readers a plan for an Ice House, which, for availability, cheapness and utility is probably hard to excel. I have tested it two years and found it to work like a charm.

In the first place I selected a piece of ground with a slope of one foot per rod, under the shade of a jack oak grove; procured 45 rails 12 feet 6 inches long, then built a four square pen four rails high, and filled it 15 inches deep with sawdust, then made a straight edge 12 feet long with a transverse piece on each end of it three feet long, took one handle off a cross cut saw, then took a one-half inch rod of iron and turned a right angle hook six inches long on one end, cut it four feet long and turned a ring as a hold for the hand on the other end, took a brace and five-eighths bit, a stout plank, two hands, and a team and sleigh, and went half a mile to a pond—took my fixtures and marked the ice off into squares of three feet; with my saw with one handle off sawed out the squares, and bored a hole near one edge of the blocks with the bit, and with my hook raised one edge of the block a few inches, slipped the plank under, gave a steady pull, and the cake was on the sleigh in a "jiffy."

Thus we continued, until we loaded nine blocks ten inches thick. I then built a pyramid of ice, nine feet square in the rail pen, leaving 18 inches of space between the ice and wall; this space I filled up with sawdust well packed in, and put dust 10 inches thick over the ice. My stack of ice was nine feet square and seven feet high. In order to keep the sawdust from sifting out at the crevices it will be necessary to use a little straw about it. I then, after building up my pen, covered with sheathing boards,—the work was done.

I have tried the above plan two years, and saved plenty of ice until ice was frozen the fall afterwards—indeed, we have plenty in the pen now, Dec. 2d, put up last January.

It will be necessary to give it some attention through the spring, and keep the dust packed well up to it at the sides.

My ice has kept so well, that there has not been waste enough from it to moisten the ground around the pen, although I have used the walls of dust two years without renewal. I last winter cleared out the bottom of the pen and let the ground freeze hard, and put in new dust below and on top of the ice. Farmers, try it, and you will continue it, doubtless. Ice is so delightful in summer, and two hands will fill a pen in two days. —P. K. HONN, *in Prairie Farmer.*

For the New England Farmer.

"IS FARMING PROFITABLE?"

MR. BROWN:—I see the above question is often asked in your journal. It might as well be asked, is trade profitable? Can commerce be so managed, as to secure a competency to him who invests his capital in ships and merchandise, to send to foreign ports? Can the lawyer, with all his hard study and diligent application of knowledge to the various exigencies of life, secure a living for himself and family? Can the mechanic, after ceaseless labor and toil, earn his daily bread, or anything more?

Now, sir, the man who is incompetent for what he undertakes will not succeed in either of the above occupations, and it is the same with farming. He who would earn his bread by farming, and anything more, must have grounds, and must know how to cultivate these grounds,—he must know what kind of seed is suitable for peculiar soils,—he must know when to sow, and when to plant, and what preparation is necessary before putting the seed into the ground. We not only have the promise of "seed time and harvest," but we have the assurance of a crop, if the right seed is put into the right ground.

Let a man select a sterile piece of land, and, perhaps, take the wrong kind of manure, spend fifty dollars in preparing an acre of ground for the seed, and he may not find a crop that will half-pay him for his labor and expense of preparation; but let him take a suitable piece of ground, and with less than half the labor and expense, the crop will pay him 100 per cent. on his investment. It is so in every pursuit of life. In order to succeed in life, a man must understand his business, and must apply himself to whatever he undertakes. Some never succeed in anything. From the want of common understanding, they fail in everything, while others, with much less labor and bustle, succeed in whatever they wish to pursue.

In all probability, no investment of a small amount pays better, than what is judiciously expended in farming. Every dollar rightly expended is generally sure to pay double, or treble. The gains are slow, to be sure, but the investments are generally light. Let a man be so situated that he could advantageously use $50,000 in preparing ground for the seed, and he would be more surely remunerated than he would in buying merchandise, and selling, for cash, and on time, as business is usually conducted.

The farmer is often discouraged, because of small gains. He forgets the small amount invested. The average of those who live by farm-

ing in New England are not worth over one to two thousand dollars. How could a man with $1000 support a family in trade, with bad debts, losses on goods purchased, &c. &c. I think, sir, from careful observation, that it will appear, that more men have become rich,—I mean, what country people call rich,—from farming than from any other pursuit. A large part of the farmers in New England commence poor, with a family, and work hard. How would they succeed in trade, under the same circumstances? DELTA.

Boston, May 31, 1862.

For the New England Farmer.

THE SLOW PROGRESS OF AGRICULTURE.

Many persons complain of the tardy advances which agriculture has made. They seem to think there is a goal of perfection which it is time it had reached, yet have a vivid sense that it is far from it, and despair—as well they may—that it will ever reach it. Perfection is a useful ideal word, yet its full significance is hard, if not impossible, to realize. A man may work his farm fifty years in regular succession, and observe all the different facts or phenomena which his crops present, and yet be unable frequently to avert disappointment. The truth is, agriculture has its "dissolving views," as well as other vocations.

There is a cause for this. Though the laws of nature always work alike, they present themselves in so many combinations that human sagacity cannot foresee their results. There are self-evident facts in agriculture, most prominent among which is, that manure and clean culture facilitate the growth of plants; but as to the kind of manure to be used, the peculiar combinations of different fertilizing elements, their effects upon different soils, the various meteorological influences, &c., these are matters of doubt, and too frequently bring disappointment to the farmer, as they must always do.

Besides, men die, and much of their knowledge goes with them, while what they leave in books or stored in the minds of their friends, must be learned by each succeeding generation, to become useful facts. But comparatively few ever obtain this knowledge. Could men live longer the world would be wiser. Columella, Cato, Pliny, &c., taught the leading facts of agriculture, and it is for us to do what we can by way of improvement. But the various soils, seasons, minds, &c., pertaining to husbandry, and the doubts, hopes, prejudices and reactions, render it slow in progress, and place the goal of perfection beyond the pale of reasonable hope. Nor, indeed, is it needed. Agriculture has always subserved its purpose; it has always fed mankind, and always will, in spite of its irregularities and short-comings.

West Medford, June, 1862. D. W. L.

HOW THE BEAN CLIMBS THE POLE.—Professor Brewer, of Washington College, Pa., communicates to *The American Journal of Sciences and Arts* the result of some experiments made by him on climbing vines—the hop, the Lima bean, and the morning glory. He finds that they will climb around a transparent glass pipe just as well as anything else, and that they are most ardent in their embraces when the pole is warmer than the surrounding air. During the day, the vine is attracted towards the light, but at night, and especially on cool nights, it turns to the pole. He learned, also, that the color of the pole makes no difference; the caressing instinct of the vine has no prejudice against any shade. The element of constancy is very largely developed, the vine, after it has reached its pole, showing a much stronger tendency to wind around it than it did before to reach it.

CURIOSITIES OF LEECH CULTURE.

Many of those who have assiduously cultivated the leech have amassed handsome fortunes, the trade being very remunerative. A prosperous merchant, away in some far district of Poland or Wallachia, will keep some two or three hundred of the inhabitants of his district in full employment collecting for him, paying them on the best of plans, according to their labor—namely, so much a dozen, according to the age and quality of the leeches which they bring to the depot. The animals must be all gathered before the heat of the day sets in, and at once carried home to the capacious reservoirs provided for their reception, where they are at once counted and paid for. Packed in clay or bags, they are at certain seasons dispatched by fleet conveyances to Marseilles, or direct to Paris, change of horses on the way being insured, when necessary, by liberal payments. The mode of packing the leeches for transport is much the same in most of the breeding districts. Some are placed in boxes—first a layer of moist, white clay, then a layer of the little animals, and so on till the chest is full. Some of the merchants pack the leeches in bags as soon as they are taken out of the marshes. Each of these bags contains about sixteen pounds weight, and it is necessary that they should be hung up for a period till the water is drained out of them, and then the animal rolls itself up into a kind of ball, and lies in a semi-torpid state till it is, perhaps, revived on its journey by a dip into some half-way pond. The boxes or bags containing the leeches are carried in light wagons divided into the necessary compartments. Relays of horses and drivers are always kept in readiness at the various stages of the journey; but, notwithstanding the greatest care may be taken in their transport, immense numbers of animals are killed. Severe frost or great heat is equally fatal to them.

CUCUMBERS AND MELONS.

"BLAST THE BUGS!" What is the matter, my friend—you seem disturbed—one ought to be serene and happy in such a place as this. "Matter—disturbed,—look at my melons, cucumbers and squashes." Look, yes, where are they? "Sure enough, where are they—all gone to the bugs." Well, friend, plant again, and then send to Parker, Gannett & Osgood's, in Blackstone Street, Boston, and procure their famous *plant protector*, put it over the plants, and you will have no more reason to *"blast the bugs."* When the season for their depredations has passed, one or two hundred of these protectors can be packed in a single flour barrel, and preserved for future use.

For the New England Farmer.

RETROSPECTIVE NOTES.

"THE BEST GATE."—In the weekly issue of this journal for May 10th, and in the monthly for June, will be found an article with the above heading, which contains information as to the construction of farm gates, which may be valuable to not a few. There must be in every town of every State, with the customs of which we have any acquaintance, a good many farmers who are tired of the trouble, loss of time, and other inconveniences which are the necessary accompaniments of the use of bars in the place of gates, and who would readily substitute the latter for the former, if only they were made acquainted with a method of making a gate without employing a mechanic, or without paying as much for it as mechanics generally would charge. Now this article under notice supplies just the information which such farmers, and all, indeed, who lose a great amount of time and patience every year with bars, are greatly in need of. It tells them how to make a gate which shall be cheap, lasting, effectual as a barrier, light, and not likely to sag or get out of order. This gate, too, beside all the above advantages, possesses the still greater recommendation of being so simple and easy of construction, that it may be made by every one who owns, and who can use, the most common tools. "Any one can build such a gate and hang it—the posts being set—in two hours."

Let all, then, who need a gate, or gates, read and inwardly digest this article. To hundreds it would be worth, in comfort, convenience, saving of time, &c., quite a little pile.

We have, for years, had a similar gate under observation, and from that, and our own "idea," we should build any gate hereafter needed a little different from that described. We should have an upright stiffener in the middle, and a facing to the board at the latch end, between which the latch should play. We would use no oak or other hard wood, but only pine, or other light wood.

"MANURES."—On page 256 of the June number of the *Farmer* may be found a brief paragraph from the pen of S. P. M., a Maine farmer, in which he gives a very sensible opinion in regard to home-made composts and commercial manures, which, if only heeded and acted upon by farmers generally, would be greatly to their advantage. This brief, but pithy paragraph,—a good specimen of the *multum in parvo*,—was called forth by the late inquiry of a correspondent—"Will Concentrated Manures Pay?"—and gives the inquirer, and all others, to understand that there is something which will pay far better. What this something is, and how it may be procured or manufactured, and how well it acts on the farm of S. P. M., he has told the readers of this journal in so small a compass, and with a wisdom as condensed as that of the proverbs of some proverbial philosophers, as to make it a vain attempt to condense his wise answer any farther. Let the reader refer to and read the two sentences in which the answer to the above question is so wisely and warily given, and then let him go to work and save every particle of everything that will fertilize or enrich his land, composting the various materials in the most approved manner, and his crops of grass, grain, roots, fruit, and all else, will be more luxuriant than if he had expended fifty dollars for a ton of a much puffed article, the real value of which has been proved by those excellent friends of the farmer, Profs. S. W. Johnson and E. Pugh, to be hardly one-third of the price at which it is sold.

The farmers of New England, as well as others, are under obligations to Dr. Pugh, for his recent exposure of the frauds which have been practiced upon them by the sale of such worthless trash as Prof. Johnson had previously shown the article under notice to be. That the obligations of farmers to these two gentlemen are as great as has been just stated, will appear quite evident, we think, from the following quotation from an article by Dr. Pugh, which has been extensively copied into or noticed by our best agricultural journals. He says, after stating that the article referred to (advertised as a superphosphate) contained but little valuable material, and a great deal of worthless matter, which would very materially increase its cost to the farmer, by increasing the cost of transportation,—"The manufacture and sale of such a manure, at such a price, implies either gross ignorance or dishonesty, and points out the necessity of our having some means of protecting the farmer from the shameful imposition that sales of such manures inflict. The sale of every 100 tons of such a manure annually would imply a loss of at least $3500 per year to the farmers, to say nothing of the still greater loss of crops, resulting from the use of such a worthless manure. Just such worthless manures as this flooded the English market a few years ago, but they have been driven out by the agricultural chemists of that country. Nothing would be easier than to drive them out of the American market, if farmers would insist that manufacturers should sell manures at prices regulated by analysis, and if there were suitable penalties attached to the fraud of not giving as good an article as the analysis called for. . . . The farmer might more effectually be protected from the frauds and ignorance of manure-venders by the employment of State chemists in each State, whose duty it should be not only to watch the manure market, but to make themselves acquainted with all the manurial resources of the State." The expense of employing a State chemist, and supplying him with the auxiliaries for experimental, agricultural and scientific researches, would, according to Dr. Pugh, be only a fraction of what would be saved to the farmers by the protection thus afforded them against worthless manures and wicked imposters.

MORE ANON.

AMONG the other curious instruments, exhibited in the Philosophical Instrument Department in the London Great Exhibition, is a machine for microscopic writing. With this machine it is stated that the words "Matthew Marshall, Bank of England," can be written in the two and a half millionth of an inch in length; and it is actually said that calculations made on this data show, that the whole Bible can be written twenty-two times in the space of a square inch. The words to be written microscopically are written in pencil, in ordinary characters, on a sheet of paper at the bottom of the instrument. But the pencil with which this is done, communicates by a series of

levers and gimbals with another minute pencil and table at the top, by means of which the ordinary writing of the pencil and the microscopic writing both move in unison, though the motion of the latter is so graduated that a stroke of a quarter of an inch at the bottom is only a stroke of a millionth of an inch at the top, the shape and character of both marks being nevertheless precisely alike in outline. As a matter of course, the microscopic writing at the top is only visible under powerful magnifiers, and the object of the machine is to mark bank notes with certain minute signatures for the prevention of forgery.

INFLUENCE OF SLEEP OVER DISEASE.

Some of our older practitioners, especially in the country, have been in the habit of having patients wakened every ten or fifteen minutes. This we regard as entirely wrong, and calculated but to increase the nervous irritability, intensify disease, and prolong the recovery. In Dr. Ware's tenth lecture on General Therapeutics, published in the *Boston Medical and Surgical Journal* for January 16th, a few remarks are made that have a bearing upon the point under consideration. He says:

"In all forms and conditions of disease, both acute and chronic, the state of the patient as to sleep, is an important consideration, both as regards his comfort, and also as regards the satisfactory progress of his case. The nature of this condition of animal life we do not fully understand; we only know that it is a necessary one, and having a vast influence on the state of the system. Its purpose seems to be to afford an opportunity, by the suspension of certain activities of the system which require the exhaustion of those powers that emanate from the nervous system, for the reinforcement of those powers. It is also during sleep that the repair of the tissues by nutrition is provided for. Not that all nutrition is suspended during our waking hours, or that all waste is suspended during sleep; but that in the two states of sleeping and waking there is respectively a large predominance of the repair and the waste. Sleep is not merely rest, as it has been sometimes considered, an entire rest of all the organs at once; it is something specifically different. It is a condition of an entirely different nature, and a condition for which rest is not, in any sense, a substitute. The mere fact of existence, without exercise, without fatigue—the simple going on of life—implies a certain expenditure of force, which renders necessary, at certain intervals, a suspension of those functions of the brain and nervous system which are subservient to the phenomena of mind. It is possible that ordinary rest might afford an opportunity for the nutrition of all these tissues, except those which are the agents of the mind. But it seems to be necessary, for the repair of these, that the functions of the mind should also be suspended. Of the physical condition of the brain in sleep, and also concerning the peculiar state of the mind in sleep, notwithstanding the many theories which have been formed concerning them, we know nothing with certainty; and this is not necessary to the practical management of the sick. What should guide us, is the knowledge that a certain amount of sleep, at proper intervals, is an absolute necessity; and that its absence or its deficiency is always a great evil, and to be prevented by every possible means. In acute diseases, a sufficient amount of quiet sleep is at once a favorable indication of the nature and issue of a case, and also is an important agent in the promotion of a favorable issue. Its absence, on the contrary, is, *pro tanto*, an unfavorable indication as to the result, and also promotes an unfavorable issue. Want of sleep adds to the sufferings of the patient, and also to his exhaustion, and consequently interferes with the success of the sanitary process, and impairs the power of recovery. In every point of view, then, the state of the patient in this respect becomes the object of special attention. Salutary changes in the condition of a patient will be often found to take place during sleep, and to manifest themselves most obviously on awaking from that which has been sound and refreshing."

Dr. Ware makes another practical remark that we know it would oftentimes be prudent to put in practice, and yet we have reason to believe it is seldom thought of by the physician, or urged upon the attention of the patient.

"It sometimes happens that, after a short nap on first going to bed, a person wakens without any known cause, and then remains obstinately watchful for many hours. In this case, if he rises, washes his face, hands and feet, and walks about briskly for awhile, and returns to bed, the charm may be broken, and a continued sleep will ensue. Or he may rise, and write or read with the same result.—*Medical Reporter of Boston.*

POULTRY HOUSES.

Properly constructed poultry houses should have a south-east aspect, sheltered by plantations or walls from the north and west, and the yards furnished with sheds and shrubs to shelter them from the mid-day sun or harsh winds; it should be constructed so as to give as much warmth as possible, but ventilation perfectly maintained. The floor should be elevated and perfectly dry; if boarded, so much the better. Walls and roofs air-tight; the windows should be placed so as to command a thorough draft in the day time in hot weather, but one should be closed at night, as a thorough draft when asleep is very injurious to them; those windows should be covered with wire lattice, to prevent the fowl getting in and out at pleasure. A lean-to roof is generally best, and the perches should rise from the floor, the first, eighteen inches from the ground and one foot apart, each perch rising a foot above the other; nests are made at each end, built of lime and brick.—*Irish Farmer's Gazette.*

For the New England Farmer.

ERRATA.

Mr. Editor:—Please allow me the privilege of correcting in the columns of the *N. E. Farmer* a mistake that occurred in the printing of my Essay "On the Utility of Birds," in the Essex County Transactions, which was copied into the "Agriculture of Massachusetts," 1862, for 1861. On page 62 of the Essay printed in this Report, is the following passage: "The far-sightedness of the robin is equally remarkable in the *blackbird*, who, though he takes a large portion of his food from

the ground, always discovers it while perched on a tree or a fence, and darts down upon it from his perch." In my manuscript, this remark was made of the *bluebird*, and is entirely incorrect as applied to the *blackbird*.

Yours, truly, WILSON FLAGG.

LADIES' DEPARTMENT.

EUGENIE'S PETTICOAT.

The Empress has just adopted a new style of petticoat, which is the despair of nearly all the women of moderate fortune who are ambitious of bearing on their persons the latest novelty that is to be found at the celebrated *modistes'* of Paris. Her imperial majesty is not ambitious to popularize the *agrements* of the toilette. She detests everything that is common, and lately begged of her tirewoman to invent something in the shape of a petticoat that could not be worn by every *bourgeois*. That marvellous garment has at last been brought out. It does not altogether supersede crinoline, but greatly circumscribes it, and its peculiar virtue is, that, get it up in the cheapest manner, it must be as dear as seven or eight ordinary petticoats, and cannot possibly be washed and smoothed for less than as many francs. Petticoats are a very sacred subject, and in any case difficult things to treat of; but the *jupon Eugenie*—that is a subject of serious disquietude to so many women—is particularly so. Nevertheless, as it is destined to limit that terrible bore—crinoline—to try and make public its peculiarities is a task that should be attempted. Beneath a ball dress, it produces an effect so charming as to call forth a torrent of the most flattering adjectives of which the French are capable. It certainly forms a graceful contrast, when its wearer dances, to the light skirts of some other lady, coming in contact with the stiff steel bars of the cage she carries about her. This wonderful petticoat is said in most instances to be made of cambric muslin, so that washer-women cannot stiffen it too much. Its circumference is six yards at the widest point, and it is covered by nine flounces of still greater circumference. The lowest of these flounces is by all accounts a mere frill; the second, a few inches longer, and considerably wider, completely covers the first; the third does the same to the second, and so on, till one great flounce falls completely over the other eight, each one of which, to arrive at the standard of imperial elegance, must be hem-stitched like a lady's pocket-handkerchief, and the outer one in addition be nearly covered with the embroidery done by the women of the Vosges. This invention also sets its face against the sewing-machine, as nearly every part of it must be hand-work. It was purposely so designed to prevent an immense number of seamstresses being suddenly thrown out of work by the increased demand for machine-sewing, which is not yet capable of effecting hem-stitching, or embroidery. The Empress's new petticoat is thus calculated to be at the same time a very exclusive institution, and one that will give as much employment to the poor needle-women as the new streets and boulevards do to the blouses.—*London Herald.*

ABOUT STRAWBERRIES.

TO PRESERVE STRAWBERRIES.

To two pounds of fine large strawberries, add two pounds of powdered sugar, and put them in a preserving kettle, over a slow fire, till the sugar is melted; then boil them precisely twenty minutes, as fast as possible; have ready a number of *small* jars, and put the fruit in boiling hot. Cork and seal the jars immediately, and keep them through the summer in a cold, dry cellar. The jars must be heated before the hot fruit is poured in, otherwise they will break.

TO PRESERVE STRAWBERRIES OR RASPBERRIES, FOR CREAMS OR ICES, WITHOUT BOILING.

Let the fruit be gathered in the middle of a warm day, in very dry weather; strip it from the stalks directly, weigh it, turn it into a bowl or deep pan, and bruise it gently; mix with an equal weight of fine, dry sifted sugar, and put it immediately into small wide-necked bottles; cork these firmly without delay, and tie bladders over the tops. Keep them in a cool place, or the fruit will ferment. The mixture should be stirred softly, and only just sufficiently to blend the sugar and the fruit. The bottles must be perfectly dry, and the bladders, after having been cleaned in the usual way, and allowed to become nearly so, should be moistened with a little spirit on the side which is to be next the cork.

STRAWBERRIES STEWED FOR TARTS.

Make a syrup of one pound of sugar and a teacup of water; add a little white of eggs; let it boil, and skim it until only a foam rises; then put in a quart of berries free from stems and hulls; let them boil till they look clear, and the syrup is quite thick. Finish with fine puff paste.

STRAWBERRY JELLY.

Express the juice from the fruit through a cloth, strain it clear, weigh and stir to it an equal proportion of the finest sugar dried and reduced to powder; when this is dissolved, place the preserving pan over a very clear fire, and stir the jelly often until it boils; clear it carefully from scum, and boil it quickly from fifteen to twenty-five minutes. This receipt is for a moderate quantity of the preserve; a very small portion will require much less time.

HOME COURTESIES.

In the home intercourse it should be remembered that each one has his place and his part. A happy and pleasant home is an impossibility where any one slights his duty. Home is not a place where you are to cosset your own fancies, or be entertained by the rest. You have no right to sit down, listless and dull, and say, "Come, amuse me and see how pleasant you can make home." You have no right to complain that home is ungenial, till you are sure that you have tried your best to make it genial. The men who complain of homes are mostly those of whom the homes complain, men whose dignity is offended at the bare suggestion that they have something to do toward making it pleasant. Home is not a mere place of entertainment, a sort of tavern, and he who turns to it for entertainment merely deserves

to be disappointed. Hast thou nothing to do, O man! but to throw thyself upon a sofa, or monopolize the easiest chair, and, holding back all thine own information, demand that wife and children amuse thee? or wilt thou go moodily out to club or store, declaring that thou wilt not stay where so little is done for thee? And shall the young man say, "My sisters do nothing to make home pleasant to me," when he has done nothing to make home pleasant to them? I do not think the different members of a home realize how much the pleasant, profitable intercourse of home depends on each, or how hard it is when one and another hang back for the rest to supply the deficiency.—*Rev. J. F. W. Ware.*

COAL OIL is said to be a sure destroyer of bedbugs. Apply plentifully with a small brush or feather to the places where they most do congregate. The cure is effectual and permanent. Gilt frames, chandeliers, &c., rubbed slightly over with coal oil, will not be disturbed by flies.

YOUTH'S DEPARTMENT.

PRINCIPLE OF THE STEREOSCOPE.

It is generally known that, by means of the stereoscope, the idea of solidity is given to the eye from pictures on flat surfaces. The principle upon which this instrument depends, so as to produce the effect in question, is thus explicable. When a house or a landscape is looked at, it is found to possess a quality which no copy on a flat surface by the best artist can produce; this is solidity or distance, the appearance of objects standing immediately behind each other. In using the term solidity it should be borne in mind that distance is the same thing, since solids are made up of the relative distances of parts of a single object. In perceiving this quality, the eye separately receives a picture of the same objects, the one picture being a little different in perspective from the other, in consequence of the difference in the relative position of the two eyes. One eye, in fact, sees a little more round one side of an object, while the other sees a little more round the other side; and it is the combination of these two pictures by the faculty of sight that gives to objects their solid appearance. Now, in order to obtain the same effect from a picture, the stereoscope is so arranged that two representations of the same object, the one slightly differing from the other in perspective, are placed at the bottom of a small box, where an opening is made, through which they are illuminated. At the upper part of the box are two small eye-pieces, adapted one for each of the observer's eyes. Through these he looks at the pictures, and the appearance of solidity is received in a very remarkable manner. It was found very difficult to draw pictures with sufficient accuracy to give good stereoscopic views since a slight error in perspective would, to a certain extent, vitiate the resulting impression on the eye. But the photographic art supplied this want, for by taking two pictures with the camera, first in the position of one eye and then removed to a little distance to that of the other this result is perfectly obtained, without any risk of error.

THE MAY QUEEN.

Little Bessie awoke one morning,
And drowsily opening her eyes,
She hastily threw back the shutters,
To take a short peep at the skies.
But sad disappointment awaited
The expectant Queen of the May,
For the sky was so black and so lowering,
She knew 'twas a rainy day.

No sooner did Bessie discover
The prospect so gloomy without,
Than, throwing herself on the pillow,
She began the day in a pout.
Soon the breakfast bell tinkled to call her
To join the kind circle below,
But she scarcely heeded its summons,
So wrapped up was she in her woe.

For she and her schoolmates so joyous,
Had long been awaiting the day
When the buds, unfolding in beauty,
Should crown her the Queen of May.
And now they had found that the forest
Was arrayed in most beautiful green;
So, with hearts overflowing in gladness,
They erected a throne for their Queen.

They had planted the May-pole so stately,
And twined it with leaves and wild flowers,
They had said—"Round this let us circle,
And dance through the soft morning hours."
'Twas sad thus to lose all their pleasure—
Have their plans all spoilt by the rain;
But, sadder by far that Queen Bessie
Should her sorrow so poorly restrain.

But not long did she nurse her repining
At the desolate scene out of doors,
For she knew that the raindrops descending,
Would brighten and cheer up the flowers.
A week from that Saturday morning
Was Bessie crowned Queen of the May,
And the woods were more fresh and more charming,
Because of that one rainy day. *Little Pilgrim.*

KEEPING A DIARY.

If a man keeps no diary, the path crumbles away behind him as his feet leave it; and days gone by are but little more than a blank, broken by a few distorted shadows. His life is all confined within the limits of to-day. Who does not know how imperfect a thing memory is? It not merely forgets; it misleads. Things in memory do not merely fade away, preserving as they fade, their own lineaments so long as they can be seen; they change their aspect, they change their place, they turn to something quite different from the fact. In the picture of the past, which memory, unaided by any written record, sets before us, the perspective is entirely wrong. How capriciously some events seem, quite recent, which the diary shows are really far away; and how unaccountably many things look far away, which in truth, are not left many weeks behind us! A man might almost as well not have lived at all, as entirely to forget that he has lived, and entirely forget what he did on those departed days. But I think that almost every person would feel a great interest in looking back, day by day, upon what he did and thought upon that day twelvemonths, that day three or five years. The trouble of writing the diary is very small. A few lines, a few words, written at the time, suffice, when you look at

them, to bring all (what the Yankees call) the surroundings of that season before you. Many little things come up again, which you know quite well you never would have thought of again, but for your glance at those words, and still which you feel you would be sorry to have forgotten. There must be a richness about the life of a person who keeps a diary, unknown to other men. And a million more little links and ties must bind him to the members of his family circle, and to all among whom he lives. Life, to him, looking back, is not a bare line, stringing together his personal identity; it is surrounded, intertwined, entangled with thousands and thousands of slight incidents, which give it beauty, kindliness, reality. Some folks' life is like an oak walking-stick, straight and varnished; useful, but hard and bare. Other men's life (and such may yours and mine, kindly reader, ever be,) is like that oak when it was not a stick, but a branch, and waved, leaf-enveloped, and with lots of little twigs growing out of it, upon the summer tree, and yet more precious than the power of the diary to call up again a host of little circumstances and facts, is its power to bring back the indescribable, but keenly-felt atmosphere of those departed days. The old time comes over you. It is not merely a collection, an aggregate of facts, that comes back; it is something far more excellent than that—it is the soul of days long ago; it is the clear Auld lang-syne itself! The perfume of hawthorn hedges is there; the breath of breezes that fanned our gray hair when it made sunny curls, often smoothed down by the hands that are gone; the sunshine on the grass where these old fingers made daisy-chains; and snatches of music, compared with which anything you hear at the opera, is extremely poor. Therefore, keep your diary, my friend.—*London Magazine.*

THE FIFTH COMMANDMENT—A BOY'S ANSWER.—An old schoolmaster said one day to a minister, who had come to examine the school, "I believe the children know the Catechism word for word." But do they understand it? that is the question," said the minister. The schoolmaster only bowed respectfully, and the examination began. A little boy had repeated the fifth commandment, "Honor thy father and thy mother," and he was desired to explain it. Instead of trying to do so, the little boy, with his face covered with blushes, said, almost in a whisper, "Yesterday I showed some strange gentlemen over the mountain. The sharp stones cut my feet, and the gentlemen saw they were bleeding, and they gave me some money to buy me shoes. I gave it to my mother, for she had no shoes either, and I thought I could go barefooted better than she could."

THE CATTLE MARKETS FOR JUNE.

The following is a summary of the reports for the four weeks ending June 19, 1862:

NUMBER AT MARKET.

	Cattle.	*Sheep.*	*Veals.*	*Shotes.*	*Fat Hogs.*
May 29	1037	2673	300	1942	400
June 5	1140	3021	400	1400	500
June 12	1134	2593	700	2200	1400
June 19	1481	3109	500	1000	1500
	4792	11,396	1900	6542	3800

There have also been at market some 2500 young pigs.

PRICES.

	May 29.	*June* 5.	*June* 12.	*June* 19.
Beef cattle, ₩ lb	5½@7	5½@7	6 @7½	5½@7
Sheep, wool on, live wt	5 @6	5 @6	5 @6	——
Sheep, clipped, live wt	4 @4½	4 @4½	4 @4½	3½@4½
Swine, stores, wholesale	3½@5	3½@5½	3 @4½	3½@4½
" " retail	5 @6½	4½@6	4½@6	4½@6
Spring pigs	11 @12½	8 @11	6½@9	7 @8½
Live fat hogs	3½@4½	3½@4½	3½@4	3½@3½
Dressed hogs	5 @5½	5 @5½	4½@5½	4½@5
Veal calves, each	$3@6	$3@6	$4 @6	$4 @6

REMARKS.—Of the whole number of cattle above reported, 3212 were from the West, mostly from Illinois, while only 1580 were from the North. Of the 11,396 sheep, 1776 were from the West, and 9620 from the North. From which it appears that during these four weeks the Western farmers have furnished the great cattle market of New England with about two-thirds of all the beeves on sale, and something like one-sixth of the whole number of sheep. The average quality of beeves has been good.

Up to June 12, there was but little change in the price of beef, although a gradual improvement might have been perceptible, but at that time there was an advance of full ¼c ₩ lb. in prices, and something probably in the allowance for shrinkage, so that the market for that week may be considered as the best for the season, perhaps for the year. A larger supply the next week brought prices back again, so that at the close of the four weeks they are very nearly the same as at the beginning.

The sheep market has been very quiet during the last month, the supply being just about equal to the demand. Lambs have gradually declined in prices. The quality of old sheep was hardly as good the last week as the first, but there has been but little change in prices.

RELATIVE VALUE OF SUBSTANCES FOR PRODUCING MILK.—Several French and German chemists estimate the relative value of several kinds of food for milch cows according to the following table:

That 100 pounds of good hay are worth—

200	pounds	potatoes.
460	"	beetroot, with the leaves.
350	"	Siberian cabbage.
250	"	beetroot, without the leaves.
250	"	carrots.
80	"	hay, clover, Spanish trefoil or vetches.
50	"	oil-cake, or colza.
250	"	pea straw and vetches.
300	"	barley or oat straw.
400	"	rye or wheat straw.
25	"	peas, beans, or vetch-seed.
50	"	oats.